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U. S. DEPARTMENT OF THE INTERIOR

PROTOTYPE OIL SHALE LEASING PROGRAM

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OIL SHALE TRACT C-b

DEVELOPMENT MONITORING REPORT #1

(April 1978 through September 1978)

Submitted to:

Mr. Peter A. Rutledge
Area Oil Shale Supervisor
Conservation District
U. S. Geological Survey
Grand Junction, Colorado

By:

C-b SHALE OIL VENTURE

ASHLAND COLORADO, INC.
OCCIDENTAL OIL SHALE, INC., OPERATOR

JANUARY 15, 1978

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DATA REPORT

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 020																	
NO																	
NO_x																	
NO_2																	
O_3																	
CO																	
SO_2																	
H_2S																	
WIND SPEED		X															
WIND DIRECTION		X															
TEMPERATURE																	
MIXING HT.		X															
INVERSION HT.		X															
STABILITY 50m		X															
STABILITY 200m		X															
PARTICULATE		X															
PRECIPITATION		X															
SITE 023																	
NO		X															
NO_x		X															
NO_2		X															
O_3		X															
SO_2		X															
H_2S		X															
THC		X															

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 023 (Cont'd)																	
CH_4		☒															
NMHC		☒															
CO		☒															
PRESSURE		☒															
SOLAR RADITION																	
WIND SPEED 10m		☒															
WIND SPEED 30m		☒															
WIND SPEED 60m		☒															
WIND DIRECTION 10m		☒															
WIND DIRECTION 30m		☒															
WIND DIRECTION 60m		☒															
HOR. WIND DIR. 60m																	
TEMPERATURE 10m		☒															
TEMPERATURE 30m																	
TEMPERATURE 60m																	
DELTA T 60-10m		☒															
RELATIVE HUMIDITY		☒															
PARTICULATES		☒															
PRECIPITATION		☒															
EVAPORATION		☒															
PILOT BALLOONS		☒															

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 042																	
WIND SPEED 10m		X															
WIND DIRECTION 10m		X															
TEMPERATURE 10m		X															
PARTICULATE		X															
SITE 056																	
WIND SPEED 10m																	
WIND DIRECTION 10m																	
TEMPERATURE 10m																	
PARTICULATE		X															

Malfunction Codes

Numerical Entry Code	Letter Code	Description
9000	CA	Calibration (calibration, system check)
9100	MT	Maintenance (changing paper, tape, charcoal)
9200	FO	Flame Out (on the GC-THC, HC, CH_4, CO)
9300	IM	Instrument Malfunction (instrument failures)
9400	PF	Power Failure (generator failure)
9500	RF	Recording System Failure (chart jams, runs out)
9550	NV	Not Visible (values were not within range of instrument i.e. inversion heights may exist beyon the full scale of the Acoustic Radar)
9600	LI	Local Interference (car nearby)
9650	OE	Operator Error (Field tech leaves switch in wrong position out of AV's control.)
9700	OS	Off Scale (at top of chart)
9750	IN	Interference (CO_2 interference on sulfur data, SO_2 interference in oxidant readings)
9800	SE	Special Experiment
9850	OR	Out for Repair (instrument removed from site with no replacement)
9900	VA	Variable Wind Direction
9950	CM	Calm (no wind direction when wind speed = 0)
9980	UN	Unlimited Ceiling (reported by NWS Stations)
9900		Blank (causes a space to be printed as in the beginning of a new month before a component starts)
8000	TR	Trace of Precipitation

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	2	0	0	0	2	0	0	2	0	0	2	0	0	0	0	2	0	0	0	0	0	2
2	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2
7	0	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	2	0	0	0	0	0	2
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	(IM)	0	2	2	0	0	0	0	0	2	0	2	0	2	2	2	0	0	2
17	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
18	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	2
19	2	2	0	2	2	0	0	0	0	2	2	2	2	0	2	2	0	0	2	2	0	0	2	0	2	2
20	0	0	0	2	2	0	2	2	0	2	2	2	0	0	0	0	0	0	0	0	2	0	2	0	0	2
21	2	4	2	4	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
22	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	0
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	( )	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	0	0
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	( )	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	4	2	4	2	2	2	2	2	2	2	2	2	0	2	2	2	0	2	2	2	2	2	2		4

REVISED 11/21/78

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1
2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1
7	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	1	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	0
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	( )	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	0	0
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	( )	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	1	1	0	1	1	0	0	1	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1		1

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	(IM)	0	2	2	0	0	0	0	0	2	0	2	0	2	2	2	0	0	2
17	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
18	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	2
19	2	2	0	2	2	0	0	0	0	2	2	2	2	0	2	2	0	0	2	2	0	0	2	0	2	2
20	0	0	0	2	2	0	2	2	0	2	2	2	0	0	0	0	0	0	0	0	2	0	2	0	0	2
21	2	4	2	4	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
22	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	0
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	( )	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	(CA)	0	0
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	( )	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	4	2	4	2	0	2	2	2	2	2	2	2	0	2	2	2	0	2	2	2	2	2	0		4

REVISED 11/21/78

OZONE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	39	39	39	39	39	39	39	35	35	43	39	49	51	55	49	59	55	55	55	55	43	47	49	39	45	59
2	39	39	39	39	39	39	39	39	43	49	49	59	59	63	59	69	71	67	59	59	49	59	53	55	51	71
3	49	47	47	39	39	39	39	49	55	49	59	59	59	69	75	69	69	75	59	55	49	59	59	49	55	75
4	49	49	49	49	59	59	59	59	59	63	63	59	67	63	63	63	59	53	59	63	59	59	59	49	59	67
5	49	35	39	29	24	29	29	43	53	55	55	55	49	43	63	69	69	69	59	55	49	49	39	35	47	69
6	39	39	43	35	43	49	35	39	49	59	49	55	59	59	49	49	55	55	55	47	35	29	29	29	45	59
7	29	35	43	39	39	35	29	35	43	49	59	55	51	49	49	39	49	43	43	49	43	39	39	35	43	59
8	29	39	29	29	29	35	29	35	39	39	43	43	49	49	43	49	49	47	49	49	39	49	49	49	41	49
9	49	49	49	43	55	49	43	49	59	69	63	69	69	63	59	59	59	59	49	43	47	49	43	39	53	69
10	43	47	59	69	69	69	75	78	75	78	78	78	78	78	59	69	59	55	49	59	49	43	43	39	63	78
11	49	49	43	49	39	35	39	49	49	59	63	75	94	88	88	88	88	88	88	78	69	69	59	63	65	94
12	59	59	59	59	49	49	49	59	59	59	69	78	69	69	59	49	59	49	49	39	39	39	39	39	55	78
13	43	39	39	39	49	49	49	49	49	59	55	59	69	69	59	59	59	49	49	49	39	49	49	49	51	69
14	49	49	49	49	49	49	43	43	49	49	49	49	49	49	49	49	49	39	49	49	49	49	49	49	49	49
15	43	49	49	59	59	59	49	49	59	59	59	59	69	59	59	59	59	59	59	49	59	49	49	39	55	69
16	43	39	39	39	39	49	49	(IM)	(IM)	49	59	59	59	49	49	49	49	59	63	59	59	63	69	63	53	69
17	69	59	49	49	49	49	49	59	59	63	75	78	69	69	78	69	69	69	69	59	49	55	59	55	61	78
18	49	49	49	49	49	55	49	39	49	59	75	75	69	69	69	78	69	59	59	59	59	59	59	59	59	78
19	69	59	49	49	59	49	39	39	59	59	69	78	75	69	69	69	69	75	78	78	69	69	69	63	63	78
20	59	59	49	49	49	49	39	49	49	59	69	69	69	69	69	59	59	59	59	59	49	55	59	59	57	69
21	59	59	59	59	59	59	43	49	59	59	69	59	59	63	61	63	59	59	59	55	39	43	47	39	55	69
22	43	39	43	39	39	39	24	39	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	75	69	69	69	69	59	59	59	59	53	75
23	69	59	55	59	61	59	63	75	75	75	(CA)	(CA)	(CA)	(CA)	(CA)	75	75	77	77	69	69	63	69	69	69	77
24	59	59	55	49	49	49	49	55	69	69	73	69	69	69	69	69	69	59	63	59	59	59	59	59	61	73
25	63	69	69	69	75	75	75	75	75	78	82	82	82	88	88	94	98	98	98	82	69	75	75	69	78	98
26	75	63	59	57	59	61	49	63	78	78	88	94	94	94	98	98	94	88	88	78	63	75	75	75	77	98
27	75	73	63	69	69	69	63	(CA)	61	61	61	63	59	59	61	61	59	59	55	55	43	43	39	39	59	75
28	39	39	45	39	39	39	39	39	(PF)	(PF)	(PF)	(CA)	(CA)	55	49	55	59	55	55	55	53	49	49	51	47	59
29	47	47	43	43	43	39	39	43	59	67	69	59	59	59	49	49	49	49	41	39	49	49	49	49	49	69
30	49	43	49	49	49	49	49	51	63	75	78	78	(CA)	78	88	88	88	88	82	75	75	78	75	78	69	88
AV	51	49	49	47	49	49	45	49	57	61	63	65	65	65	63	65	65	63	61	59	53	55	53	51	57	
PK	75	73	69	69	75	75	75	78	78	78	88	94	94	94	98	98	98	98	98	82	75	78	75	78		98

SULFUR DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	5	13	13	13	18	13	13	13	13	13	13	5	3	13	13	13	3	5	13	13	13	13	5	13	10	18
2	13	13	5	3	3	3	3	13	3	8	13	13	13	5	3	5	5	3	5	3	3	3	3	3	5	13
3	5	5	3	3	3	5	5	5	3	3	3	3	3	3	8	3	3	3	3	3	3	5	3	3	3	8
4	3	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	3	3	3	5
5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
6	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3	3	3	3	3	3	3	3	5
7	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
8	3	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5
9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
11	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
12	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
13	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
14	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	3	3
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
19	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
20	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	5	5	5	5	3	5
21	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	10	8	10
22	10	10	10	10	10	10	10	10	(CA)	(CA)	(CA)	(CA)	13	13	13	13	5	5	5	5	5	5	3	5	8	13
23	5	5	5	5	5	5	8	8	8	3	5	10	0	0	(CA)	5	10	10	10	10	10	10	10	10	8	10
24	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
25	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
26	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
27	10	10	10	10	10	10	10	(CA)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
28	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
29	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	5	10
30	0	0	0	0	0	0	5	5	0	0	0	0	0	0	5	10	26	26	21	13	10	5	10	5	5	26
AV	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
PK	13	13	13	13	18	13	13	13	13	13	13	13	13	13	13	13	26	26	21	13	13	13	10	13		26

HYDROGEN SULFIDE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1
3	1	3	1	0	0	3	0	0	0	0	0	0	0	3	0	0	3	1	0	1	0	0	0	0	1	3
4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	0	0	1	0	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
6	3	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	3
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	(CA)	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	3	3	1	0	3	3	0	0	0	1	1	0	1	3	0	0	3	1	0	1	0	1	0	3		3

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TOTAL HYDROCARBONS                                                          CB-TRACT
(UG/M3)                                                                     TRAILER 23
                                                                            JUNE 1978
                                                                            OCCIDENTAL OIL SHALE INC.

                                             HOUR (LOCAL STANDARD TIME)

DAY     1     2     3     4     5     6     7     8     9    10    11    12    13    14    15    16    17    18    19    20    21    22    23    24   AVE  PEAK

  1  2300  2200  2200  2200  2200  2200  2200  2400  2600  3100  2900  2800  2500  2200  2200  2200  2200  2200  2200  2200  2100  2200  2200  2200  2300  3100
  2  2200  2200  2100  2100  2100  2100  2200  2300  2100  2000  2100  2200  2200  2100  2200  2300  2200  2200  2200  2200  2300  2300  2400  2300  2200  2400
  3  2300  2200  2200  2200  2200  2200  2400  2700  2800  2800  2700  2600  2600  2500  2500  2300  2100  2200  2200  2200  2400  2200  2200  2200  2400  2800
  4  2200  2200  2200  2100  2200  2200  2200  2200  2400  2400  2400  2300  2200  2100  2200  2200  2200  2200  2000  2100  2000  2000  2000  1900  2200  2400
  5  1900  1900  1900  2000  1900  2000  2000  2300  1300  1400  1400  1400  1400  1500  1400  1600  1700  1800  1800  1900  1900  2000  2000  2000  1800  2300
  6  2000  2000  2000  2000  2000  2000  2200  2400  1300  1300  1200  1400  1400  1100  1100  1300  1400  1600  1700  1800  2000  2000  2000  2000  1700  2400
  7  2100  2200  2200  2200  2300  2500  2600  2900  2900  1400  1400  1200  1400  1400  1600  1700  1700  1800  1800  1800  1900  1900  2000  2000  2000  2900
  8  2000  2100  2100  2100  2000  2200  2200  2300  2400  2600  2000  2900  2900  2800  2800  1000  1300  1300  1600  1800  1800  1800  2000  2000  2100  2900
  9  2100  2100  2200  2200  2300  2300  2600  2800  1000  1200  1400  1500  1600  1600  1700  1700  1700  1800  1900  1900  2000  2100  2100  2000  1900  2800
 10  2100  2200  2200  2200  2200  2100  2100  2200  2200  2000  2000  1900  1800  1800  1800  1700  1700  1800  1800  1900  1900  2000  2000  2100  2000  2200
 11  2100  2000  1800  1900  1800  1900  2200  2600  2600  2600  2700  2700  2500  2400  2300  2200  2100  2000  2000  2000  2000  2000  2000  2000  2200  2700
 12  2000  2000  2000  2000  2000  2000  2300  2600  1100  (CA)  (CA)   500   500  (CA)  1000  1000   900  1300  1600  1500  1600  1400  2000  2200  1600  2600
 13  2300  2400  2400  2500  2600  2800  2800  2600  2300  1800  1700  1800  1900  1800  1800  1900  1900  1900  2000  2000  1900  2000  2000  2000  2100  2800
 14  2000  2000  2000  2000  2200  2100  2000  2100  1000  1100  1200  1400  1000  1200  1000  1000  1000  1000  1000  1200  1200  1500  1700  1800  1500  2200
 15  1800  1800  1800  1800  1800  1800  1800  2200  2200  2000  1600  1700  1600  1400  1400  1400  1400  1400  1500  1500  1600  1600  1500  1400  1700  2200
 16  1600  1600  1600  1600  1200  1000   800  (IM)  (CA)  (CA)  1500  1600  1500  1700  2200  2400  2400  2400  2400  2400  2400  2400  2400  2400  1900  2400
 17  2400  2400  2400  2400  2300  2300  2300  2500  2600  2600  2600  2600  2600  2600  2400  2400  2300  2300  2300  2200  2200  2100  2100  2100  2400  2600
 18  2200  2100  2000  2000  2000  2000  2100  2200  2300  2400  2400  2300  2000  2000  2000  2000  1700  1800  1700  1600  1600  1800  2000  1800  2000  2400
 19  2000  1800  1900  2000  1900  1900  2000  1800  1400  1600  1800  1900  1900  1000  1900  2000  2100  2100  2000  2100  2000  2000  2000  2000  1900  2100
 20  2000  1900  1900  1900  1900  1900  2200  2200  2400  2300  2600  2400  1300  1400  1600  1600  1300  1700  2000  1800  1900  2000  2000  2200  1900  2600
 21  2200  2100  2200  2200  2100  1800  2000  2400  1200  1100  1000  1000  1000  1100  1000  1000  1100  1200   900  1300  1200  1300  1500  1400  1500  2400
 22  1600  1700  1600  1600  1600  1700  1600  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (  )  1700
 23  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  1000  1200  1400  1500  1600  1700  1700  (  )  1700
 24  1800  1700  1900  1900  2000  2000  2100  2200  2200  2200  2100  2000  1700  1600  1600  1500  1500  1500  1300  1500   900  1200  1400  1600  1700  2200
 25  1400  1500  1500  1200   400   700  1000  1600  1600  2900  2000  1900  2000  1800  1800  2200  2900  2800  2500  2400  1600  2500  2600  2200  1900  2900
 26  2300  2100  2200  1300  1000  1600  1600  1800  1600  1400  1500  (CA)  1300  1500  1800  1600  1200   900   900   700   500   500   700  1000  1300  2300
 27  2100  2900  2800  2600  1800  3100  2900  2500  1500  1400  1900  1800  2100  1300  1600  1600  2000  3300  2100  3000  (CA)  (CA)  (CA)  (CA)  2200  3300
 28  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (  )  (  )
 29  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (CA)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (  )  (  )
 30  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (  )  (  )

 AV  2000  2000  2000  2000  1900  2000  2100  2300  2000  2000  1900  1900  1800  1700  1800  1800  1800  1800  1800  1900  1800  1900  1900  1900  1900
 PK  2400  2900  2800  2600  2600  3100  2900  2900  2900  3100  2900  2900  2900  2800  2800  2400  2900  3300  2500  3000  2400  2500  2600  2400        3300
```

REVISED 11/21/78

METHANE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	800	800	800	800	700	800	800	800	900	800	700	700	700	800	900	900	900	1000	900	900	1000	900	900	900	800	1000
2	800	900	800	800	800	800	900	900	900	1000	1000	1000	1000	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	1000
3	1000	1000	1000	1000	1100	1000	1100	1400	1400	1200	1100	1100	1200	1100	1100	1200	1100	1100	1100	1100	1200	1100	1100	1100	1100	1400
4	1200	1200	1200	1100	1100	1100	1100	1100	1100	1100	1100	1100	1200	1200	1100	1200	1100	1100	1100	1200	1000	1000	1100	1100	1100	1200
5	1100	1000	1000	1000	1000	1000	1100	1000	1000	900	1000	900	1000	900	900	900	900	1000	900	1000	900	900	900	900	1000	1100
6	900	900	900	900	900	900	900	900	800	900	900	900	900	800	800	800	900	900	900	900	900	900	900	900	900	900
7	900	900	900	900	900	900	900	900	900	900	800	800	900	900	900	900	900	900	900	900	900	900	900	900	900	900
8	900	900	900	900	900	900	800	800	800	800	800	800	900	900	900	800	800	800	900	900	900	900	900	900	800	900
9	900	900	900	900	900	900	900	900	700	700	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
10	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
11	900	1000	1000	1000	1000	1000	1100	1300	1200	1100	1000	1000	1100	1100	1100	1100	1100	1100	1000	1000	1000	1100	1100	1100	1100	1300
12	1100	1100	1100	1100	1100	1100	1000	1100	900	(CA)	(CA)	500	(CA)	(CA)	800	900	900	900	1000	1000	1000	900	1000	1100	1000	1100
13	1100	1100	1100	1100	1100	1200	1000	1100	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000	1200
14	900	900	900	900	900	900	900	900	700	800	800	900	800	800	800	900	800	900	900	900	900	900	900	900	800	900
15	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	800	900	900	900	900	900	900	900	900	900	900
16	900	900	900	900	700	600	600	(IM)	(IM)	900	900	900	900	1000	900	900	900	900	900	900	900	1000	1000	900	900	1000
17	1000	1000	1000	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	1000	900	1000	1000	900	1000	1000	1000	1000	1000	1000	1000
18	1000	1000	1000	1000	1000	1000	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
19	1000	900	1000	900	900	900	900	900	900	900	900	900	900	800	900	900	900	900	900	900	900	900	900	900	900	1000
20	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
21	900	900	900	1000	900	900	900	1000	1000	1000	900	900	900	900	800	800	900	900	800	900	900	900	900	900	900	1000
22	900	900	900	900	900	900	900	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	900
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	800	900	900	900	900	900	900	( )	900
24	900	900	1000	900	900	900	1000	900	900	900	900	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
25	900	900	900	900	400	700	900	900	700	700	600	600	600	500	500	500	500	500	500	500	600	600	600	600	700	900
26	600	600	600	500	500	600	600	600	600	600	600	(CA)	900	900	1000	1000	900	900	900	700	500	500	700	1000	700	1000
27	1000	1100	1100	1100	1000	1200	1100	(CA)	900	900	1000	1000	1000	1000	1000	1000	1000	1100	1000	1000	1000	(CA)	(CA)	(CA)	1000	1200
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	( )
29	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	900	900	900	900	900	900	900	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	
PK	1200	1200	1200	1100	1100	1200	1100	1400	1400	1200	1100	1100	1200	1200	1100	1200	1100	1100	1100	1200	1200	1100	1100	1100		1400

NON-METHANE HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDFNTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	1500	1400	1400	1400	1400	1400	1400	1600	1700	2400	2200	2200	1800	1400	1400	1200	1200	1200	1200	1300	1100	1300	1400	1300	1500	2400
2	1400	1300	1300	1300	1300	1300	1400	1400	1200	1000	1100	1100	1200	1200	1200	1300	1200	1200	1200	1200	1300	1300	1400	1300	1300	1400
3	1200	1200	1100	1200	1000	1200	1200	1300	1400	1600	1600	1400	1400	1400	1400	1100	1000	1100	1100	1100	1200	1100	1100	1000	1200	1600
4	1000	1000	1000	1000	1100	1100	1000	1100	1200	1200	1200	1200	1000	900	1000	1000	1100	1000	900	900	1000	900	900	800	1000	1200
5	800	900	900	900	900	900	900	1200	300	500	500	500	500	600	600	700	800	900	900	900	1000	1000	1000	1000	800	1200
6	1000	1000	1000	1000	1100	1200	1400	1500	500	500	400	600	500	300	300	500	600	800	900	900	1000	1100	1100	1200	900	1500
7	1200	1300	1400	1400	1400	1600	1800	2000	2100	500	600	400	500	600	700	900	900	900	1000	900	1000	1000	1100	1100	1100	2100
8	1200	1200	1200	1200	1200	1300	1400	1500	1600	1800	1200	2100	2100	1900	1900	300	500	500	800	900	900	900	1000	1000	1200	2100
9	1200	1200	1200	1300	1400	1400	1700	1900	300	500	500	700	700	800	900	900	900	1000	1000	1000	1100	1200	1200	1200	1100	1900
10	1200	1300	1300	1300	1200	1200	1200	1200	1200	1200	1000	1000	900	900	900	900	800	900	900	1000	1000	1100	1100	1200	1100	1300
11	1200	1000	900	900	900	900	1000	1300	1400	1500	1600	1600	1400	1200	1200	1000	1000	900	900	900	900	900	900	900	1100	1600
12	900	900	900	900	900	900	1200	1500	300	(CA)	(CA)	0	500	(CA)	300	200	0	400	600	500	700	500	900	1100	700	1500
13	1200	1200	1200	1400	1500	1600	1700	1500	1300	900	900	900	1000	900	900	1000	1000	1000	1100	1000	1000	1100	1000	1200	1200	1700
14	1200	1000	1100	1200	1200	1200	1200	1200	300	300	500	500	200	500	300	100	300	100	200	300	300	600	800	900	600	1200
15	900	900	900	900	900	900	900	1200	1300	1000	700	800	700	500	500	600	500	500	600	700	700	700	600	500	800	1300
16	700	700	800	700	500	400	200	(IM)	(CA)	(CA)	600	700	700	700	1300	1500	1600	1500	1500	1500	1400	1400	1400	1500	1000	1600
17	1400	1400	1400	1400	1300	1300	1300	1500	1600	1600	1600	1600	1600	1600	1400	1400	1300	1300	1400	1200	1200	1100	1100	1100	1400	1600
18	1200	1100	1000	1000	900	1000	1200	1200	1300	1400	1400	1300	1000	1000	1000	1000	700	800	700	700	700	300	1000	800	1000	1400
19	1000	900	900	1000	1000	1000	1100	900	500	700	900	1000	1000	200	1000	1100	1200	1200	1000	1200	1100	1000	1100	1000	1000	1200
20	1000	1000	1000	1000	1000	1000	1300	1300	1400	1400	1700	1500	400	500	700	700	500	800	1000	900	1000	1100	1100	1300	1000	1700
21	1300	1200	1300	1200	1200	900	1100	1400	200	100	200	100	200	300	200	300	300	300	100	500	400	500	600	600	600	1400
22	700	900	700	700	800	900	800	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	900
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	200	400	500	700	700	800	800	( )	800
24	900	800	900	1000	1000	1100	1100	1200	1300	1200	1200	1000	900	700	700	700	600	600	500	600	100	400	500	700	800	1300
25	600	600	600	300	0	0	100	700	900	2200	1400	1300	1400	1300	1300	1600	2400	2300	2000	1800	1000	1900	2000	1600	1200	2400
26	1700	1500	1600	800	500	1000	1000	1200	1000	800	900	(CA)	500	600	700	700	300	0	0	0	0	0	0	0	600	1700
27	1000	1800	1600	1500	800	1900	1800	2500	600	500	900	800	1000	300	700	700	900	2200	1100	2000	(CA)	(CA)	(CA)	(CA)	1200	2500
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	( )
29	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	1100	1100	1100	1100	1000	1100	1200	1400	1000	1100	1000	1000	900	800	900	900	900	900	900	900	900	1000	1000	1000	1000	
PK	1700	1800	1600	1500	1500	1900	1800	2500	2100	2400	2200	2200	2100	1900	1900	1600	2400	2300	2000	2000	1400	1900	2000	1600		2500

Revised 11/21/78

CARBON MONOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	700	700	700	700	700	700	700	600	600	700	600	600	(CA)	(CA)	1000	1000	1000	1000	1000	1000	1100	900	900	900	600	1100
2	900	800	900	800	800	900	900	900	(CA)	(CA)	1000	900	900	1000	600	300	200	300	200	200	200	200	200	200	600	1000
3	200	200	200	600	200	300	200	300	200	200	200	300	300	300	200	200	200	200	200	200	200	300	200	200	300	600
4	200	200	200	200	300	200	200	200	300	200	200	200	300	200	200	200	500	300	300	300	200	200	200	200	300	500
5	200	200	300	200	200	200	200	200	1700	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	300	1700
6	200	200	200	200	200	200	200	200	200	500	600	600	800	800	600	800	800	800	800	800	600	700	600	600	500	800
7	600	500	600	500	500	600	500	300	500	700	600	700	800	700	800	800	800	800	800	800	700	500	500	500	600	800
8	300	300	300	300	300	300	300	300	300	500	600	800	900	1000	1000	500	500	500	600	600	500	300	200	200	500	1000
9	200	200	200	200	200	200	200	200	200	200	200	200	300	300	300	200	300	300	300	300	500	500	300	300	300	500
10	300	300	300	300	200	200	200	300	200	200	200	300	300	200	300	300	300	500	300	300	500	300	300	300	300	500
11	300	300	200	200	200	200	200	200	200	200	200	200	300	300	300	300	300	300	300	300	300	300	200	200	300	300
12	200	200	200	200	200	200	200	200	(CA)	(CA)	(CA)	500	300	(CA)	600	700	1900	900	500	500	500	500	300	300	500	1900
13	300	500	500	300	300	300	300	300	300	300	500	300	500	300	300	300	300	300	300	300	300	300	300	300	400	500
14	300	300	300	300	300	300	300	300	300	200	200	200	300	300	300	300	200	300	500	1500	2100	300	300	300	400	2100
15	300	300	300	300	300	300	300	300	300	500	500	300	300	500	300	300	300	300	300	300	500	500	600	500	400	600
16	300	300	300	300	300	300	300	(IM)	(CA)	(CA)	500	300	300	300	300	300	300	300	500	300	300	300	300	300	400	500
17	300	300	300	500	500	500	500	300	300	500	500	300	500	300	500	500	500	300	500	500	500	500	500	300	400	500
18	300	500	500	500	300	500	300	300	500	300	300	500	300	300	300	300	300	300	300	300	300	300	300	300	400	500
19	300	500	300	500	300	500	500	300	300	500	300	300	300	300	300	300	300	300	300	500	300	300	300	300	400	500
20	300	300	300	300	300	300	300	300	300	300	300	500	500	300	300	500	500	300	300	300	300	500	500	300	400	500
21	500	300	500	500	500	500	500	500	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	400	500
22	300	300	300	300	300	500	300	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	500
23	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	300	300	500	300	300	300	300	( )	500
24	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	500	300	300	300	300	300	500
25	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	500	300	500	300	300	300	300	300	400	500
26	300	300	300	300	300	300	200	300	300	200	300	(CA)	300	300	500	500	500	500	500	500	300	500	500	500	400	500
27	500	500	500	500	500	500	500	(CA)	300	300	500	300	300	300	600	300	300	600	300	500	(CA)	(CA)	(CA)	(CA)	400	600
28	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	( )	( )
29	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(CA)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	500	400	400	500	500	400	400	400	400	
PK	900	800	900	800	800	900	900	900	1700	700	1000	900	900	1000	1000	1000	1900	1000	1000	1500	2100	900	900	900		2100

PARTICULATE DATA (UG/M3)
CB-TRACT
OCCIDENTAL OIL SHALE INC.

MO	DY	YR	TRL20	TRL23	TRL42	TRL56
6	2	78	30.9	33.1	18.3	20.1
6	5	78	8.0	6.7	6.2	5.7
6	8	78	21.2	26.2	12.8	8.7
6	11	78	21.8	22.4	32.2	19.3
6	14	78		12.1	28.8	16.7
6	17	78	26.2	28.4	52.0	20.6
6	20	78	27.2	27.3	22.4	21.2
6	23	78	24.1	27.6	31.2	25.0
6	26	78	27.9	18.8	30.6	23.5
6	29	78	10.8	7.0	12.8	9.6
		AV	22.0	21.0	24.7	17.0
		GM	20.3	18.4	21.3	15.5
		PK	30.9	33.1	52.0	25.0

WIND SPEED
METERS / SEC

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	4	4	4	4	4	(RF)	3	2	2	2	2	2	2	3	4
3	2	2	2	2	2	2	2	1	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	2	3	1	(RF)	(RF)	(RF)	(RF)	(RF)	( )	3
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	4	3	4	4	4	2	3	2	1	1	1	1	1	1	2	2	4
6	2	2	2	3	3	3	2	1	2	2	4	3	3	4	6	4	3	3	5	2	1	2	2	1	3	6
7	2	2	3	3	3	3	3	2	1	1	2	2	4	4	3	7	4	4	4	2	2	2	3	4	3	7
8	3	4	3	3	2	2	2	3	1	1	2	2	3	3	3	3	3	3	2	(RF)	1	1	2	3	2	4
9	3	3	3	4	3	3	4	4	3	4	5	5	5	6	6	6	5	4	3	2	3	3	2	3	4	6
10	3	3	3	4	4	4	4	4	5	6	7	7	7	7	7	7	5	5	4	3	1	1	2	4	4	7
11	4	4	2	1	1	1	1	2	2	2	3	5	6	6	5	5	5	4	4	2	3	2	1	2	3	6
12	2	2	3	2	2	4	3	3	3	3	3	4	5	5	4	5	5	4	3	2	3	2	3	3	3	5
13	2	3	3	2	3	3	4	5	6	6	5	4	4	5	5	5	5	4	4	1	2	2	2	3	4	6
14	3	3	3	3	3	2	2	2	4	4	5	5	4	4	4	4	5	5	3	2	3	3	2	3	4	5
15	3	4	4	3	3	3	4	3	5	6	5	5	6	6	6	7	6	6	4	2	2	3	3	3	4	7
16	3	3	3	2	3	3	3	2	4	5	5	6	6	6	6	7	6	5	4	2	1	2	2	2	4	7
17	1	2	2	2	2	2	1	2	2	2	2	3	4	4	5	6	5	4	3	3	2	2	2	2	3	6
18	3	2	3	2	3	3	3	2	1	2	5	5	5	6	6	5	6	5	4	3	2	3	3	3	4	6
19	3	2	1	1	2	2	2	1	1	2	4	6	8	7	5	5	5	7	5	3	2	3	3	2	4	8
20	2	2	2	3	3	3	3	2	3	2	3	2	2	3	3	3	4	3	4	2	2	2	3	3	3	4
21	4	4	3	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	4	2	2	3	3	3	4	5
22	4	2	2	3	3	3	3	3	2	2	3	5	5	4	6	6	6	4	4	2	3	2	2	2	4	6
23	2	3	3	4	4	3	3	3	5	4	4	5	5	5	5	5	4	4	3	2	2	3	3	3	4	5
24	3	3	3	3	3	3	3	4	4	5	6	7	7	7	6	7	7	6	5	2	3	3	3	4	4	7
25	4	3	3	3	3	2	4	5	6	5	5	4	3	4	5	6	6	5	6	4	4	2	2	2	4	6
26	2	2	2	3	2	2	3	2	2	2	3	4	6	4	4	4	4	4	4	3	2	4	3	3	3	6
27	3	3	4	4	4	4	3	5	6	6	5	4	4	5	5	5	5	4	4	2	3	3	3	3	4	6
28	4	3	3	4	4	3	5	3	4	4	4	4	3	5	4	4	8	6	5	6	4	2	2	2	4	8
29	3	2	3	4	4	4	6	4	2	2	3	4	4	4	3	3	4	4	4	5	4	2	2	2	3	5
30	3	3	3	4	4	4	4	4	3	1	2	3	4	4	5	4	3	3	1	3	3	2	3	3	3	5
AV	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	4	4	3	2	2	2	3	4	
PK	4	4	4	4	4	4	5	5	6	6	7	7	8	7	7	7	8	7	6	6	4	4	3	4		8

WIND SPEED @10M
METERS / SEC

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	3	2	3	3	2	2	2	2	2	3	3	4	5	5	4	4	5	4	2	2	3	2	1	3	5
2	2	1	2	1	2	2	1	2	1	2	2	3	4	4	5	6	5	2	2	2	2	2	3	3	3	6
3	3	3	2	3	2	1	1	2	1	2	4	3	4	4	7	5	2	4	2	3	4	2	4	4	3	7
4	3	3	4	3	5	4	3	2	4	4	6	6	3	2	3	5	5	3	5	4	2	4	3	1	4	6
5	1	1	1	1	1	2	1	2	2	4	6	2	5	3	3	3	2	1	1	1	1	2	2	1	2	6
6	2	1	1	1	1	1	1	1	1	2	3	3	3	5	8	3	3	4	4	3	3	2	3	2	3	8
7	1	1	1	0	0	0	1	1	2	2	2	3	6	0	4	8	6	4	4	3	1	3	3	1	2	8
8	2	3	2	2	1	1	1	1	1	3	4	3	3	3	3	3	3	4	4	4	3	2	1	1	2	4
9	3	1	1	2	2	1	2	4	2	7	8	8	9	11	10	10	8	8	4	4	6	5	5	3	5	11
10	5	5	7	8	8	6	5	7	8	11	12	11	11	10	13	11	9	10	7	6	5	4	3	4	8	13
11	6	4	2	2	2	1	2	1	2	2	3	5	6	6	7	8	6	6	4	4	1	1	2	3	4	8
12	1	1	1	1	1	0	1	1	2	1	5	7	7	8	7	8	8	8	6	3	4	4	3	3	4	8
13	4	4	4	4	5	9	8	9	8	9	6	8	6	8	9	9	8	8	5	3	4	5	6	5	7	9
14	4	1	4	5	7	6	5	5	5	6	7	8	7	6	7	9	9	8	6	5	5	4	5	4	6	9
15	4	4	4	3	3	3	3	5	9	8	8	8	9	9	8	8	8	10	8	6	6	6	4	4	6	10
16	4	4	4	4	4	4	4	7	8	5	9	8	10	9	13	9	11	10	9	5	2	2	2	2	6	13
17	2	2	3	2	2	1	1	1	3	2	3	3	4	5	5	7	7	6	4	2	1	1	1	1	3	7
18	2	2	2	1	1	1	1	1	2	5	7	8	7	9	8	9	9	8	8	5	4	6	6	6	5	9
19	4	2	4	3	2	2	1	1	2	3	5	6	7	7	4	4	4	6	8	5	4	2	2	1	4	8
20	1	1	2	1	1	1	0	1	2	2	2	2	2	3	3	4	3	4	5	4	4	2	1	1	2	5
21	4	1	1	2	3	3	2	2	1	6	7	6	6	(MT)	9	7	8	8	7	4	4	4	3	2	4	9
22	3	2	2	2	1	0	1	1	2	2	5	8	7	7	7	6	8	8	8	4	4	4	3	2	4	8
23	2	3	2	2	2	4	4	7	7	6	7	8	7	6	7	8	7	7	7	5	4	5	6	4	5	8
24	4	3	1	1	1	2	2	4	7	6	7	9	10	8	9	8	9	10	9	5	5	6	7	8	6	10
25	9	7	7	7	7	6	7	7	5	5	5	4	3	5	4	5	5	6	4	5	3	3	2	3	5	9
26	3	3	3	3	2	0	1	1	1	2	3	8	8	5	5	7	7	5	5	2	3	2	1	0	4	8
27	2	5	6	3	7	7	6	6	7	7	7	6	6	8	6	7	6	4	4	4	3	7	7	5	6	8
28	4	4	2	5	4	5	5	6	(PF)	(PF)	4	2	4	4	4	3	8	7	5	5	3	1	2	2	4	8
29	2	1	2	3	3	3	2	1	2	2	2	4	3	4	2	2	4	4	4	6	4	3	3	2	3	6
30	2	3	3	3	3	2	2	2	2	2	3	4	5	4	4	2	2	2	2	3	4	1	1	2	3	5
AV	3	3	3	3	3	3	3	3	4	4	5	5	6	6	6	6	6	6	5	4	4	3	3	3	4	
PK	9	7	7	8	8	9	8	9	9	11	12	11	11	11	13	11	11	10	9	6	6	7	7	8		13

WIND SPEED @30M
METERS / SEC

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	3	2	3	3	2	2	2	2	2	4	3	4	4	3	4	5	5	4	3	3	4	2	1	3	5
2	1	1	1	1	2	2	1	1	2	2	1	2	3	4	4	4	5	2	3	3	2	2	3	3	2	5
3	3	2	2	3	2	1	1	1	1	2	3	3	3	2	7	5	2	3	2	3	4	3	4	3	3	7
4	3	3	4	4	6	3	3	2	2	4	5	5	3	2	3	5	5	3	4	4	2	4	3	1	4	6
5	1	1	1	1	1	2	1	1	2	3	4	5	6	3	2	3	2	1	1	2	2	2	2	1	2	6
6	1	1	1	1	1	0	1	1	1	3	2	3	2	5	8	4	3	4	4	3	4	2	3	2	3	8
7	1	1	1	1	1	0	0	1	2	2	3	4	6	3	5	8	4	4	4	2	1	3	3	1	3	8
8	2	2	1	2	1	1	1	1	1	1	3	2	3	2	3	2	3	4	4	4	4	2	1	1	2	4
9	1	1	1	2	2	1	2	3	4	5	8	9	9	10	9	8	8	7	4	4	6	6	5	3	5	10
10	5	6	7	8	8	7	5	7	9	11	11	11	10	11	13	11	8	8	7	6	5	4	4	4	8	13
11	6	4	2	2	2	1	1	1	2	2	3	5	6	6	7	7	5	5	4	3	2	1	2	3	4	7
12	2	1	1	1	1	0	1	1	1	1	4	7	6	4	7	9	7	6	5	4	4	4	4	4	4	9
13	7	5	6	6	6	9	9	9	9	8	7	8	8	8	7	8	8	6	5	3	4	6	6	6	7	9
14	5	1	4	6	7	6	5	5	5	5	7	7	6	8	8	8	9	8	6	5	5	5	6	5	6	9
15	4	6	5	4	3	3	3	5	7	9	9	8	9	8	8	8	9	7	7	7	6	7	5	5	6	9
16	5	6	6	5	5	4	4	5	8	6	10	9	8	9	9	12	11	9	8	5	2	2	2	1	6	12
17	2	2	2	3	2	1	1	1	2	2	2	3	2	5	5	5	6	5	4	2	1	1	0	1	3	6
18	2	2	1	1	0	1	1	1	1	5	7	9	7	9	8	8	8	7	7	5	5	6	7	6	5	9
19	5	2	4	4	2	2	1	1	1	2	3	5	6	5	4	4	3	4	7	5	4	3	2	1	4	7
20	1	1	1	1	1	1	0	1	2	2	2	2	2	3	3	2	2	4	5	4	4	3	1	1	2	5
21	3	2	2	3	4	3	2	1	5	7	5	5	5	6	6	7	7	7	6	5	6	6	4	2	4	7
22	3	1	2	1	1	1	1	1	2	2	5	7	6	8	6	6	8	7	7	5	5	5	3	3	4	8
23	3	3	2	2	2	4	4	6	7	7	6	7	7	6	5	6	7	6	6	5	4	6	7	5	5	7
24	5	4	4	3	1	3	6	4	6	7	7	9	9	7	8	9	8	8	8	4	7	7	8	9	6	9
25	9	7	8	7	8	8	8	7	5	5	5	3	3	4	5	6	5	5	4	5	3	3	3	2	5	9
26	2	3	3	3	2	1	1	1	1	2	3	8	4	5	5	6	5	4	4	3	3	2	1	1	3	8
27	3	6	6	7	8	7	6	6	6	6	6	4	6	8	7	8	6	5	4	4	4	7	7	4	6	8
28	4	4	2	5	5	6	5	6	(PF)	(PF)	3	3	4	3	4	4	8	7	5	5	3	2	2	2	4	8
29	2	2	2	3	4	3	2	1	2	2	4	4	4	4	2	3	4	5	4	6	4	3	3	2	3	6
30	3	4	3	4	3	3	2	2	2	2	2	4	4	3	4	2	2	2	2	2	4	1	1	2	3	4
AV	3	3	3	3	3	3	3	3	4	4	5	5	5	5	6	6	6	5	5	4	4	4	4	3	4	
PK	9	7	8	8	8	9	9	9	9	11	11	11	10	11	13	12	11	9	8	7	7	7	8	9		13

WIND SPEED @60M
METERS / SEC

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	2	2	3	3	3	2	2	2	2	3	4	4	4	4	5	4	5	8	3	3	4	2	1	3	8
2	1	1	1	1	1	2	1	1	2	2	2	2	3	3	4	5	6	3	3	3	2	2	3	4	3	6
3	3	2	2	3	2	2	1	2	1	2	3	3	4	4	7	6	2	4	2	3	4	3	4	3	3	7
4	3	4	4	4	7	5	3	1	2	4	5	6	3	3	3	4	4	3	5	4	3	4	4	1	4	7
5	1	1	1	1	1	1	1	1	2	3	4	5	6	4	3	3	2	1	1	2	2	2	3	1	2	6
6	1	1	0	1	1	1	1	1	1	2	3	3	3	5	8	4	3	4	4	3	3	1	3	2	2	8
7	1	0	0	1	1	0	1	1	2	2	2	4	7	4	4	8	4	4	4	2	1	4	4	1	3	8
8	1	2	1	2	1	1	1	1	1	2	3	3	3	4	3	3	3	4	4	4	4	4	0	0	2	4
9	1	1	1	2	2	1	2	4	5	5	8	8	9	9	11	9	8	8	5	6	8	8	11	4	6	11
10	8	8	9	5	9	8	6	8	9	10	11	11	12	11	14	10	9	8	8	8	6	5	6	4	8	14
11	6	5	3	3	2	2	1	1	2	2	3	6	5	5	5	7	6	6	4	4	2	1	2	2	4	7
12	2	1	0	0	1	0	1	1	2	1	5	7	7	5	9	10	8	7	6	4	4	5	6	6	4	10
13	8	2	7	8	8	10	9	8	9	8	6	6	7	9	7	8	8	7	6	4	4	8	8	8	7	10
14	7	2	8	7	8	7	6	5	4	5	8	8	6	8	8	8	8	8	8	7	7	8	7	6	7	8
15	6	7	7	6	5	5	4	6	9	10	9	9	9	10	9	8	11	9	8	8	8	9	7	6	8	11
16	6	7	7	6	6	5	4	5	6	10	8	8	10	9	8	11	10	10	8	7	4	4	3	2	7	11
17	2	3	3	3	2	2	1	2	3	2	2	3	3	4	6	6	7	6	4	3	1	1	0	2	3	7
18	2	1	0	1	1	1	1	1	1	5	7	7	9	5	7	9	9	8	8	7	7	8	8	8	5	9
19	7	3	4	4	2	1	1	1	1	2	3	5	7	6	4	4	4	6	6	5	4	4	3	1	4	7
20	1	1	1	1	1	1	0	1	2	2	2	1	2	3	2	3	2	4	6	5	4	2	1	1	2	6
21	2	3	4	3	3	3	3	2	1	7	6	4	7	(MT)	7	7	8	7	7	6	7	8	6	3	5	8
22	2	3	2	1	1	1	1	1	2	1	4	7	6	8	8	7	8	8	7	6	7	6	4	4	4	8
23	3	2	2	2	2	5	6	7	7	7	7	7	7	6	6	7	8	7	7	5	6	8	8	7	6	8
24	7	4	4	4	2	4	5	5	6	7	7	9	10	8	9	8	9	9	9	5	7	8	10	9	7	10
25	10	10	9	9	9	8	8	8	5	5	5	8	4	6	5	7	4	5	4	6	4	4	4	2	6	10
26	3	2	3	3	2	1	1	1	1	2	2	8	5	4	5	6	6	5	5	3	2	3	1	2	3	9
27	4	6	8	9	10	8	6	6	7	6	6	5	6	8	7	6	6	5	4	4	4	8	8	6	7	10
28	5	6	4	5	6	7	6	6	(PF)	(PF)	4	2	4	4	4	4	9	7	6	6	4	2	3	2	5	9
29	3	2	2	3	4	4	3	1	1	2	4	4	3	4	2	2	4	6	5	7	5	4	3	3	4	7
30	3	4	3	3	3	2	2	2	2	2	3	4	4	4	4	2	2	2	2	3	5	3	2	1	3	5
AV	4	3	4	4	4	4	3	3	4	4	5	6	6	6	6	6	6	6	5	5	4	4	4	4	4	
PK	10	10	9	9	10	10	9	8	9	10	11	11	12	11	14	11	11	10	9	8	8	9	11	9		14

DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
MRI STATION = 042 PERIOD(6/01/78 TO 6/30/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	1	1	1	1	2	2	3	4	4	4	4	4	5	5	5	4	2	3	3	1	1	1	3
2	1	1	1	1	1	1	1	1	2	2	3	3	4	5	4	6	3	2	2	2	2	3	2	2	2
3	2	1	1	1	1	1	1	2	2	2	3	3	4	5	6	3	3	3	3	3	3	3	3	4	3
4	1	3	3	3	3	2	2	3	4	6	6	3	3	2	3	4	4	4	5	3	3	3	1	1	3
5	1	1	1	1	1	1	1	2	3	0	4	6	5	3	3	2	2	2	2	2	2	2	2	2	2
6	1	1	1	2	1	1	1	1	2	3	3	3	4	7	5	3	4	5	2	2	3	3	2	2	3
7	2	2	2	2	2	2	1	1	1	2	3	5	5	5	4	7	4	4	4	2	3	3	3	0	3
8	2	4	3	4	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	3
9	2	2	2	3	2	2	2	3	5	6	7	8	9	9	9	9	8	6	4	4	5	6	4	3	5
10	3	3	5	6	6	5	5	7	9	10	11	11	11	11	11	10	8	8	7	5	4	4	4	2	7
11	4	3	2	2	1	1	1	2	2	3	3	7	7	6	6	6	5	5	3	2	2	2	1	2	3
12	2	2	2	2	2	2	4	1	1	2	5	7	6	6	8	9	8	6	4	8	3	3	3	3	4
13	3	3	3	3	3	4	8	10	9	7	6	7	8	8	8	8	7	7	4	4	3	3	3	4	5
14	2	2	2	3	3	2	3	5	5	7	7	8	6	8	8	8	9	8	6	5	4	3	2	2	5
15	3	3	3	3	3	2	3	6	9	9	8	8	9	7	9	10	11	9	7	4	3	5	4	3	6
16	2	3	3	2	2	2	3	5	8	8	8	9	9	9	10	12	10	9	7	4	3	2	2	2	6
17	2	2	2	2	2	2	1	1	2	2	3	3	4	6	7	8	7	5	2	2	2	1	1	2	3
18	2	2	2	2	3	2	1	1	2	4	7	7	7	9	8	9	8	7	6	5	5	5	5	5	5
19	3	3	4	3	2	2	1	1	1	2	5	8	12	5	5	5	6	7	5	3	3	1	1	1	4
20	1	1	1	1	1	1	1	2	2	2	3	3	3	2	3	3	3	4	4	3	2	2	2	3	2
21	3	3	3	2	2	2	2	2	5	6	6	6	6	6	7	7	7	6	5	5	3	3	2	3	4
22	2	1	2	2	2	2	2	2	2	3	5	6	6	7	8	7	8	7	5	5	4	3	3	2	4
23	2	3	3	3	2	2	3	5	6	6	7	7	6	6	6	7	6	7	5	4	3	2	2	2	4
24	2	2	2	2	2	2	3	6	6	6	8	8	9	9	9	9	9	9	7	4	5	5	6	8	6
25	8	7	6	6	7	6	7	7	6	5	5	3	3	4	5	6	6	6	4	3	1	1	1	1	5
26	1	1	1	1	2	2	1	1	1	2	3	6	6	5	5	5	6	5	4	2	2	4	2	2	3
27	2	2	3	3	7	5	5	6	7	7	6	5	7	7	7	7	5	9	4	3	3	3	2	2	5
28	3	2	3	3	3	2	3	3	4	4	3	3	3	4	4	5	3	7	6	5	3	2	2	2	4
29	2	2	2	3	3	3	2	2	2	2	5	5	4	2	2	3	3	3	4	4	3	3	2	2	3
30	2	2	3	3	3	3	3	2	2	2	2	6	5	5	4	2	2	2	2	3	3	3	2	2	3
MEAN	2	2	2	2	2	2	3	3	4	4	5	6	6	6	6	6	6	6	4	4	3	3	2	2	4

TOTAL NUMBER OF OBSERVATIONS = 720

NOTE: **** = MISSING DATA

WIND DIRECTION
DEGS

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	270	270	275	292	275	295	315	5	52	90	110	105	220	0	311
3	100	100	110	100	100	112	90	90	290	292	270	275	292	290	315	350	0	112	100	(VA)	340	270	(VA)	247	17
4	260	60	15	120	100	90	90	290	280	280	285	290	157	140	225	292	320	135	300	290	160	90	90	45	349
5	80	90	105	90	100	95	100	90	270	280	350	320	270	350	110	100	100	112	112	110	(VA)	100	100	100	90
6	112	112	120	130	135	135	125	100	305	292	270	280	(VA)	320	320	310	285	290	290	85	75	100	95	90	85
7	100	112	135	125	125	125	125	125	315	300	270	305	350	350	337	315	315	0	20	67	90	100	110	125	63
8	125	125	125	125	115	100	112	135	130	290	270	270	270	280	265	290	292	320	245	40	80	100	95	125	139
9	135	130	112	130	112	112	130	130	157	180	210	200	202	205	220	225	220	220	157	115	110	100	55	70	151
10	112	90	90	90	110	112	130	160	180	225	210	180	215	220	220	225	225	225	220	200	160	130	90	290	172
11	280	290	337	10	90	90	90	305	290	310	315	300	292	292	292	292	305	300	320	22	112	112	90	100	329
12	100	110	112	112	105	120	120	135	290	292	292	202	180	5718	0	220	202	225	225	157	110	112	110	125	147
13	100	100	112	100	100	100	90	135	150	160	170	175	170	220	205	225	247	230	230	180	100	112	100	100	146
14	90	115	112	100	100	100	100	125	160	195	195	180	202	180	205	190	225	220	212	140	112	112	112	100	149
15	100	100	100	100	100	112	105	125	175	202	220	180	180	210	225	230	225	225	225	230	90	100	95	100	156
16	100	95	95	95	100	100	125	135	170	180	202	220	220	225	220	230	230	205	202	(VA)	(VA)	112	110	100	157
17	90	100	100	100	100	100	95	315	315	180	292	330	270	292	285	292	295	315	320	45	100	125	112	95	38
18	105	105	120	100	120	135	135	112	95	157	160	170	190	180	202	175	180	202	220	202	112	100	100	100	144
19	(VA)	100	30	100	100	90	90	95	292	292	300	300	292	300	292	270	292	305	330	355	90	125	135	125	2
20	125	120	90	125	135	135	135	225	300	270	292	292	275	(VA)	(VA)	(VA)	292	250	190	202	90	112	135	135	171
21	150	150	112	95	100	130	100	112	202	202	230	240	220	202	210	225	225	205	202	165	100	112	130	135	165
22	130	112	100	112	112	112	120	130	215	315	(VA)	202	210	202	240	247	247	240	225	157	112	105	112	112	158
23	112	112	112	125	135	112	95	120	220	220	202	185	210	225	240	247	220	230	230	160	105	112	120	105	163
24	95	112	120	120	112	115	130	247	225	225	185	202	180	202	235	247	250	247	230	210	120	130	210	215	185
25	190	135	130	120	135	157	190	260	315	350	320	310	(VA)	22	280	315	315	310	310	350	125	112	112	112	331
26	112	112	112	112	112	120	135	(VA)	(VA)	270	280	225	230	202	202	202	230	202	220	(VA)	112	150	140	130	167
27	130	135	135	130	120	120	135	135	180	180	202	260	215	202	202	225	202	202	175	135	95	120	110	110	158
28	120	112	112	135	120	112	125	112	180	220	260	247	(VA)	300	292	265	125	120	112	125	120	135	80	112	136
29	135	130	135	140	140	140	160	160	130	320	310	315	270	150	(VA)	90	120	130	80	105	90	112	135	120	127
30	120	120	135	140	140	135	140	135	120	130	45	230	140	135	130	(VA)	300	300	160	45	112	120	112	125	128
PV	116	111	107	112	113	115	110	133	222	245	256	247	227	235	246	253	255	236	220	127	105	113	112	110	134

WIND DIRECTION @10M
DEGS

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

	HOUR (LOCAL STANDARD TIME)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	235	220	220	250	240	250	285	310	290	285	285	305	320	320	345	350	240	355	355	5	100	135	105	325	293
2	205	175	195	235	220	235	290	280	300	300	315	315	315	325	335	310	330	355	60	95	45	325	260	275	294
3	225	205	225	225	220	315	270	310	235	325	345	330	305	310	345	15	65	100	105	250	330	295	15	255	295
4	195	150	40	165	160	155	270	330	300	305	315	330	10	355	340	325	345	75	320	325	45	65	80	140	355
5	225	165	300	280	210	205	270	305	330	315	340	325	225	270	240	150	120	330	340	75	30	250	185	180	264
6	225	185	45	240	225	0	55	330	325	320	300	300	320	345	340	320	300	300	245	110	190	75	150	210	300
7	90	110	195	282	285	270	20	5	345	325	340	335	15	0	15	305	330	355	50	255	315	130	180	85	346
8	95	105	(VA)	120	290	350	75	(VA)	10	345	345	330	345	320	285	225	175	175	205	195	200	10	50	15	354
9	125	(VA)	180	150	90	(VA)	115	185	200	200	190	200	210	205	220	210	205	215	190	190	190	185	190	225	188
10	185	195	190	195	190	190	190	195	200	200	205	205	215	210	210	220	210	210	220	205	215	220	205	290	206
11	290	295	320	290	230	235	280	300	285	345	315	305	290	295	305	330	330	335	325	325	100	195	225	220	294
12	165	180	(VA)	340	225	50	70	335	330	290	215	190	205	180	210	205	215	235	235	200	195	190	190	195	211
13	185	190	190	190	185	185	185	210	190	195	205	185	190	215	215	205	205	220	215	205	190	200	205	195	198
14	195	10	195	187	175	170	185	190	200	215	220	210	225	195	205	205	235	225	210	195	185	185	185	185	199
15	190	185	185	180	180	160	135	195	200	205	195	185	195	200	205	220	210	220	220	205	200	200	195	190	194
16	195	195	190	185	185	180	180	185	190	200	200	200	205	205	220	215	215	215	205	190	275	230	230	260	205
17	245	250	245	240	230	265	290	5	5	335	345	0	0	300	285	290	320	330	340	335	160	240	300	285	299
18	185	140	210	150	225	195	70	20	345	200	195	205	190	210	210	205	205	190	220	205	190	185	190	200	195
19	205	280	270	250	250	215	5	350	350	320	290	275	290	290	275	260	265	305	310	310	320	235	255	230	281
20	185	225	215	130	355	0	5	300	330	(VA)	315	295	330	5	10	305	250	195	200	195	190	300	(VA)	120	283
21	150	165	205	125	110	105	75	310	205	215	190	195	220	(MT)	215	210	210	210	215	200	195	205	200	(VA)	190
22	90	10	235	215	195	15	50	20	10	275	215	185	205	210	210	210	225	230	215	200	190	200	185	195	210
23	210	95	(VA)	65	125	190	195	210	210	210	200	200	215	210	210	215	215	205	210	195	185	195	200	200	196
24	195	210	200	180	30	190	190	195	215	210	210	195	190	195	215	210	215	210	210	210	205	210	210	220	204
25	210	205	200	200	200	200	205	210	315	340	315	320	285	210	255	255	285	290	300	315	275	265	275	260	258
26	240	230	240	230	210	10	30	320	340	300	340	195	195	200	200	220	210	200	230	205	205	210	325	270	239
27	200	170	175	180	180	180	165	150	175	195	195	215	205	205	220	205	195	205	185	175	200	175	175	185	188
28	140	140	150	165	170	180	175	190	(PF)	(PF)	210	200	215	210	210	195	105	90	105	115	105	110	170	110	158
29	120	160	105	125	150	120	100	95	225	330	320	295	345	75	110	75	145	155	(VA)	130	155	105	135	95	117
30	95	115	105	110	120	115	75	75	45	350	45	180	210	125	105	320	250	255	150	195	195	30	0	105	108
PV	186	180	202	194	198	195	138	283	284	277	266	247	249	242	244	243	230	232	226	203	191	200	198	209	235

WIND DIRECTION @30M
DEGS

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	265	230	255	255	255	250	280	290	305	290	290	320	320	320	330	355	345	340	345	355	80	110	105	30	309
2	(VA)	180	195	285	250	240	280	295	290	315	305	310	295	295	330	305	325	5	50	85	30	15	275	285	303
3	245	220	232	235	230	260	245	300	270	300	320	310	300	315	335	5	65	95	95	255	330	280	10	265	287
4	250	170	10	150	155	155	(VA)	315	320	310	305	320	350	350	310	315	335	85	305	305	50	60	80	125	341
5	125	290	25	0	75	205	255	315	330	320	330	320	225	265	275	(VA)	150	20	0	85	25	270	190	180	311
6	220	(VA)	40	(CM)	(VA)	120	90	315	325	340	285	310	320	330	330	315	305	295	265	110	170	95	125	215	315
7	140	90	110	205	290	290	185	340	340	345	315	330	355	355	5	320	325	345	15	255	350	100	155	115	344
8	110	170	120	310	350	80	55	55	5	325	350	325	325	350	330	190	155	165	190	190	195	180	5	40	37
9	105	160	185	190	110	325	120	190	205	200	210	215	210	210	205	205	210	220	195	195	190	185	190	230	193
10	190	200	200	200	200	190	195	195	205	215	205	205	215	215	210	220	215	215	215	210	220	218	215	295	210
11	295	300	325	320	300	265	285	330	315	345	310	300	305	295	305	330	330	325	325	330	45	120	265	245	311
12	215	210	(VA)	285	290	80	75	335	310	295	225	200	220	180	205	210	220	230	230	215	190	190	190	185	220
13	190	200	190	180	180	190	180	185	185	190	195	195	195	215	200	205	210	225	225	215	190	190	200	200	197
14	195	290	195	190	185	180	190	190	200	210	210	195	225	195	205	205	255	215	210	200	195	190	185	190	203
15	195	195	195	200	205	190	160	180	200	205	205	205	210	200	210	215	215	220	210	210	205	205	205	200	202
16	205	200	195	190	190	195	190	190	195	215	205	200	210	210	235	220	235	215	215	200	285	260	255	290	215
17	265	270	270	285	265	285	275	20	355	310	330	15	340	290	295	275	320	335	340	330	120	30	310	285	311
18	155	165	180	135	90	200	100	45	285	185	200	200	190	210	205	215	215	210	215	205	200	190	195	210	190
19	205	290	275	260	240	205	0	325	20	295	285	285	265	280	280	260	265	305	310	320	315	270	315	0	289
20	150	190	245	250	355	35	95	295	310	345	270	285	345	345	0	330	255	190	200	195	200	160	120	115	261
21	150	170	130	155	110	120	165	210	205	205	210	205	215	230	210	205	215	205	215	200	200	200	200	225	194
22	110	(VA)	240	225	180	110	90	315	10	285	210	190	200	220	215	210	230	230	220	210	195	195	190	185	206
23	200	105	240	50	195	185	195	212	205	200	195	190	195	210	195	210	200	210	215	205	195	205	205	205	199
24	195	215	195	205	110	200	190	195	220	205	205	195	195	200	210	210	215	215	215	210	205	205	205	220	203
25	210	205	205	200	205	205	210	215	275	340	310	310	300	215	230	260	285	300	300	315	295	280	290	270	260
26	265	255	265	255	230	300	50	300	330	315	355	200	205	190	210	215	215	200	230	205	200	165	100	190	232
27	170	170	170	180	180	175	165	155	170	185	210	225	220	210	215	215	200	200	185	180	170	175	175	185	187
28	150	150	150	165	175	180	180	185	(PF)	(PF)	210	225	210	255	205	200	100	95	110	120	120	125	160	160	165
29	165	180	135	125	165	135	115	100	225	260	300	300	190	95	115	95	135	155	(VA)	140	160	115	140	120	145
30	105	120	110	110	120	120	90	75	50	10	45	165	215	135	120	345	260	245	150	190	200	190	345	120	124
PV	186	198	200	212	196	191	165	266	280	277	260	250	244	244	244	244	239	230	231	209	191	182	193	205	237

WIND DIRECTION 060M
DEGS

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	290	255	260	270	270	275	285	305	300	305	290	320	330	325	340	340	345	352	350	0	65	100	85	20	320
2	100	125	175	300	280	245	275	275	300	305	325	315	305	325	325	320	325	10	50	75	25	30	295	305	321
3	270	245	245	250	255	250	255	310	285	305	330	335	300	310	340	5	55	110	85	270	345	290	22	285	300
4	255	165	5	135	155	165	(VA)	330	320	315	310	330	5	355	315	325	340	(VA)	315	310	50	65	90	75	347
5	310	325	25	20	30	210	260	285	325	315	355	320	230	275	275	170	155	310	5	80	20	275	205	200	304
6	250	280	205	100	115	135	140	325	315	335	305	310	330	335	335	315	320	295	260	130	170	(VA)	115	210	289
7	225	145	205	245	250	285	235	340	330	325	325	330	5	345	10	325	330	355	25	265	280	120	155	210	301
8	105	165	110	300	355	30	45	50	0	345	345	345	325	350	340	200	155	170	200	200	205	200	245	(VA)	336
9	190	215	195	195	230	290	145	190	220	215	205	220	215	220	210	215	215	220	205	210	200	195	195	240	210
10	200	205	205	205	205	200	195	195	205	220	215	210	220	225	220	220	225	215	225	220	230	230	220	305	216
11	305	305	325	340	320	325	285	315	300	320	300	310	300	295	315	325	335	335	330	330	40	15	320	280	319
12	260	230	(VA)	50	270	85	80	345	315	300	225	205	220	185	210	210	220	235	240	230	195	200	205	195	225
13	200	215	200	195	190	195	190	195	190	195	205	195	200	225	210	220	215	230	230	225	205	215	218	215	207
14	205	200	210	200	195	195	195	195	200	215	210	215	230	200	205	210	240	220	220	210	205	200	190	195	207
15	205	210	205	215	220	205	165	180	200	210	205	210	220	215	220	225	220	235	220	220	215	215	220	215	211
16	220	215	210	200	205	210	195	190	205	215	210	200	215	220	225	230	235	225	220	210	300	290	300	325	224
17	295	300	300	305	280	310	310	355	5	330	325	355	330	300	290	295	315	340	330	335	90	110	35	315	325
18	135	205	110	30	105	140	130	95	310	200	205	205	205	225	205	220	220	215	225	215	210	200	205	220	193
19	220	305	290	285	275	215	255	330	0	300	290	295	280	290	265	270	260	310	315	320	320	285	330	10	293
20	35	25	305	250	235	185	230	295	315	345	280	300	340	345	335	240	255	210	205	205	210	185	(VA)	125	267
21	155	180	190	160	115	150	205	210	215	215	220	220	210	(MT)	225	210	225	210	220	220	215	215	215	230	203
22	75	(VA)	240	250	215	170	30	55	10	270	215	200	210	230	215	225	240	250	230	220	205	210	205	200	221
23	205	115	(VA)	0	165	210	210	225	220	205	210	210	215	220	220	230	215	220	220	215	210	210	215	215	211
24	215	220	215	210	195	210	200	215	225	210	215	205	210	205	225	210	225	230	225	225	210	215	220	225	215
25	220	210	215	218	215	215	215	225	300	340	315	315	310	225	240	255	295	300	300	315	315	300	330	330	272
26	290	285	290	275	255	225	255	295	320	315	350	200	210	195	210	215	215	210	230	210	210	170	150	195	237
27	190	180	180	185	185	185	170	170	185	195	220	240	215	215	225	215	205	215	195	195	180	190	190	190	196
28	155	155	160	175	180	185	190	195	(PF)	(PF)	225	240	225	230	230	210	110	110	120	135	135	150	165	170	175
29	190	200	155	150	170	155	130	100	230	300	300	300	345	80	135	65	140	160	140	145	155	125	155	150	152
30	135	135	145	120	130	140	110	90	65	5	20	170	225	140	130	325	240	245	155	205	210	205	215	180	157
PV	213	211	213	226	214	202	204	259	283	280	268	259	257	254	250	246	242	241	235	224	208	202	206	225	246

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                 DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
                  MRI STATION = 042 PERIOD( 6/01/78 TO  6/30/78)


                                                      HOUR
DAY    1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24    MEAN

  1  ***   60  102    8   80   87  308  290  275  274  285  298  304  301  339   18  343  340   15   18  111  350   90   95     357
  2   30   66  137  109  209   30  253  287  270  294   85  300  322  212  333  292  325   41   90  100  328  291  283  292     322
  3  112   90  114   80   64   85   83  344   56  225  310  295  272   30  349   35   92  104  153  254  302  276   59  165      57
  4  244  115  305  135  111   98   76  324  305  306  315  314  106   77  329  330  340   96  292  303  118   86  337   94      13
  5  251  116  139  103  131   32   69  332  312  314  357  310  236  253  234  138   61  260   85  113  296  229   61  112      69
  6  132   97   92  100  106   93   50  339  249  292  318  288    1  355  352  294  301  298  288  120   88  100  335   77      18
  7   97   92   80   96   81   85   88  130  260  272  312  337   37  322   79  326  330   27   18  143  114  138  115  105      68
  8  120  115  108  132  136  108  104  102   76  357   56   51   22  348   84  332  250  150  207  260   91   96  112   82      93
  9  122   72   88   99   62   91   93   86  202  217  217  204  240  224  237  234  239  239  201  184  197  184  104  355     182
 10   63   76  180  199  204  201  187  202  214  220  229  205  224  230  227  234  234  225  239  226  236  233  222  302     218
 11  298  286  302  278  284   11  207  330  271  305  289  300  309  299  307  326  328  317  327  320  120  249  204   64     301
 12   92   87   94   85  101  102   90  327  296  284  353  224  221  179  214  240  227  240  239  229   69   80  108  102     150
 13   79   96   76   77   79   72  136  187  185  201  208  196  206  226  235  220  236  224  228  225  185   62   86  100     171
 14   86   85   55   66   60   60   68  215  210  219  217  205  232  216  200  243  253  238  234  226  196   72   89  102     177
 15   83   95   93   88   90   85  102  121  222  214  218  204  195  222  222  245  241  252  233  242  235  172  197  196     188
 16  103   78   87   93   87   78   96  199  202  210  207  199  231  224  243  247  249  228  230  211  277  255  257   86     199
 17  298  254  244  315  234  342   87  230  286   43  309  353   29  323  308  292  296  317  325  333   77   63   95   66     327
 18  188  149  118  102  108   82   91   61   49   15  214  216  227  221  227  232  206  231  228  238  189  201  183  210     185
 19  202  258  289  256  345   88   72   74  315  296  305  306  282  298  338  265  308  326  325  322  310   65  105  231     310
 20  237   66   60   89   91  106   87  324  281  355  338  290  350  248  188  324  293  200  205  201  103  103   78   89      58
 21   95   93   92  108   68   76   83   69  224  258  251  217  204  258  207  255  232  221  223  203  192   83  104   91     165
 22  132  132    2  119   99   93   75   76   62  316  214  201  216  222  239  244  252  239  239  216  184   77  109  118     164
 23   97   77   50  111   74   82   77   71  212  215  197  194  205  244  269  211  201  212  236  214  177  157   93   96     161
 24   83  111  106   95   98   75   85  226  213  202  219  223  200  221  225  241  236  226  230  226  209  227  224  223     199
 25  219  109  206  207  206  216  210  226  329  353  278  326   23  241  243  283  290  303  318  320  299  306  266  245     267
 26  291  265   95   89  117   90   91  309  334   32  324  219  212  173  194  230  255  203  226  207  199  102  124   87     185
 27   93   82   60  136  181  185  154  152  196  218  221  256  212  204  227  222  212  223  192  183   30  146  118   91     175
 28  126   92  123  141  116   95   72   64  206  228  247  262  288  254  289  205   90  107   91  105   95  107  119   94     125
 29  124  102   92  126  121  101  115  101   66   66   59  281  287   95  298  107  158  123   35  137  102  102  129  107     102
 30  100  118   93  116  108  100   96   77   60  329   26  230  169  158  111  283  281  243  216  155   80  101  107   96     113

EAN  115   98   94  106  105   86   96   51  257  278  274  257  250  243  255  263  265  239  242  215  155  120  120  103     183


                           TOTAL NUMBER OF OBSERVATIONS = 719

 NOTE: **** = MISSING DATA
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TEMPERATURE @10M
DEG. C

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	5	4	3	2	2	2	3	4	6	8	11	13	14	16	17	17	17	17	16	14	12	10	10	7	9	17
2	7	7	6	5	4	4	6	7	9	12	14	16	17	18	18	18	18	18	17	16	14	14	11	10	12	19
3	8	6	6	5	6	6	9	11	13	15	15	15	18	16	13	14	14	14	17	13	12	11	9	8	11	18
4	7	7	8	7	8	8	11	12	13	14	14	11	13	16	17	17	16	14	13	10	9	8	8	7	11	17
5	7	6	6	4	4	4	4	7	9	11	13	13	10	8	8	8	9	12	12	9	9	7	6	6	9	13
6	6	5	4	5	5	5	6	8	11	13	14	15	17	18	17	17	18	17	15	14	12	11	10	10	11	18
7	9	11	10	11	10	9	10	13	15	17	18	19	18	18	17	18	18	18	15	15	14	12	12	10	14	19
8	10	9	9	8	8	8	9	13	17	18	19	20	20	22	22	22	21	21	18	16	16	15	16	15	16	22
9	14	14	13	13	12	13	14	18	21	22	23	23	24	25	26	26	26	24	23	22	22	21	20	18	20	26
10	18	18	18	19	19	18	19	21	22	22	23	23	24	25	26	24	24	23	23	23	22	21	19	16	21	26
11	13	12	10	10	8	8	9	11	12	14	15	17	19	19	19	20	20	19	18	17	16	14	10	10	14	20
12	9	8	7	7	7	7	8	12	15	17	22	23	23	23	24	25	25	25	24	21	19	19	18	17	17	25
13	18	17	17	17	17	17	18	19	21	21	22	23	24	25	24	25	25	24	24	21	19	17	17	17	21	25
14	17	15	16	17	17	17	18	19	21	22	22	22	22	23	24	24	24	24	24	22	20	20	19	19	21	24
15	18	18	17	17	17	16	17	19	20	21	22	23	23	24	24	25	24	24	23	21	19	18	17	17	20	25
16	17	16	16	16	15	15	14	17	18	20	21	22	23	23	24	24	24	23	22	20	18	17	15	13	19	24
17	12	10	10	8	7	7	8	11	12	13	14	17	18	20	20	20	20	19	18	18	16	14	13	9	14	20
18	8	7	8	8	8	8	11	14	18	20	22	22	23	24	24	24	24	24	23	22	21	22	21	20	18	24
19	18	17	13	12	11	10	12	14	16	18	19	21	22	22	22	22	22	22	21	19	17	15	14	13	17	22
20	13	12	10	8	8	8	9	12	13	17	18	18	20	22	23	23	24	23	23	20	18	17	17	16	16	24
21	16	17	16	16	14	15	15	18	22	23	23	24	24	26	26	26	26	26	26	23	21	19	19	18	21	26
22	18	15	16	14	14	15	15	18	21	23	24	25	26	26	27	27	27	26	26	23	21	21	21	18	21	27
23	18	16	17	17	18	18	19	21	23	23	24	25	26	27	26	27	27	27	27	24	22	22	22	20	22	27
24	19	18	19	18	18	18	18	20	22	23	23	24	26	27	27	27	28	27	26	24	23	23	23	23	23	28
25	22	20	19	18	18	17	18	20	20	20	21	21	22	23	23	23	23	22	21	19	17	16	14	13	19	23
26	11	11	8	8	7	7	9	11	14	16	18	22	22	23	23	24	23	24	23	22	19	18	17	17	17	24
27	17	17	17	17	17	17	18	20	21	22	22	22	23	24	24	25	24	25	24	24	21	20	20	20	21	25
28	19	19	18	18	18	18	18	19	(PF)	(PF)	(PF)	21	22	22	22	22	18	18	17	16	16	16	15	14	18	22
29	14	14	13	13	13	13	13	16	18	20	19	17	16	17	13	14	13	13	14	13	13	12	12	12	14	20
30	12	12	11	10	11	11	13	16	18	21	21	18	18	18	21	22	23	23	23	21	18	18	17	16	17	23
AV	13	13	12	12	11	11	12	14	17	18	19	20	21	21	22	22	22	21	21	19	17	16	16	14	17	
PK	22	20	19	19	19	18	19	21	23	23	24	25	26	27	27	27	28	27	27	24	23	23	23	23		28

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 042 PERIOD(6/01/78 TO 6/30/78)

DAY	HOUR 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	2	0	-1	-2	-3	-2	1	2	6	8	10	12	13	14	16	16	16	16	16	13	11	9	4	2	7
2	2	1	0	0	0	0	4	8	11	13	17	17	18	21	21	20	19	19	17	14	14	13	12	9	11
3	7	3	3	1	0	1	4	9	12	13	16	16	14	17	16	13	14	14	13	12	11	10	8	7	10
4	6	6	6	5	6	6	9	11	12	13	13	7	13	16	18	16	15	13	12	7	7	7	6	4	10
5	3	3	1	1	1	1	1	6	8	11	12	12	10	6	5	6	8	10	9	8	6	6	4	3	6
6	2	1	0	0	-1	0	2	8	10	11	13	16	17	18	16	18	18	18	16	13	11	10	8	6	10
7	4	3	3	2	2	3	7	13	16	18	19	19	17	19	18	19	19	19	13	13	11	9	8	7	12
8	7	6	6	4	4	4	7	12	16	19	19	21	21	23	23	23	24	24	23	22	16	12	11	10	15
9	8	7	6	6	6	6	9	14	20	22	24	24	26	27	27	27	27	27	26	23	21	21	20	16	18
10	13	12	16	13	18	19	19	21	22	23	24	24	26	26	27	26	24	24	24	24	23	21	21	18	21
11	14	12	11	9	8	6	8	11	13	14	14	18	19	19	19	19	20	20	20	19	14	11	7	6	14
12	4	3	2	2	1	1	4	12	14	19	21	24	24	24	26	27	26	26	25	23	17	13	11	11	15
13	10	9	9	8	8	8	18	20	21	22	24	25	26	26	26	27	27	27	26	24	20	13	11	11	19
14	11	11	9	10	8	8	12	21	22	24	25	24	23	25	26	26	27	26	26	26	21	18	14	13	19
15	12	11	11	9	8	7	11	19	21	22	22	24	25	26	27	27	27	27	26	25	22	19	20	17	19
16	11	9	9	8	8	7	9	16	20	21	21	22	23	24	26	25	24	25	24	21	19	18	16	11	17
17	11	7	8	7	7	2	5	11	11	14	15	17	19	19	20	21	21	19	19	19	16	10	7	5	13
18	6	3	3	2	2	2	4	9	17	21	22	23	24	25	26	26	26	26	26	24	21	20	21	19	17
19	20	17	14	11	10	8	8	12	17	19	20	21	21	23	23	24	22	23	22	20	19	14	11	9	17
20	6	5	3	3	2	2	6	12	14	19	19	21	23	23	25	26	26	26	24	23	18	13	11	10	15
21	9	10	9	8	9	9	12	18	23	23	26	26	27	27	28	28	28	27	28	25	21	16	13	13	19
22	14	11	10	8	7	7	11	18	22	24	26	27	27	28	28	28	28	28	28	25	21	18	16	14	20
23	12	12	11	11	11	11	13	19	23	25	26	27	28	28	28	29	29	29	28	27	23	20	19	18	21
24	16	17	16	15	15	14	16	21	23	24	25	26	27	27	28	28	29	29	27	26	24	24	24	23	23
25	23	21	19	19	19	19	19	21	19	19	21	22	21	23	23	25	23	23	22	20	18	16	13	12	20
26	10	6	5	3	1	1	4	10	13	16	19	22	22	22	24	25	25	24	24	24	19	13	13	11	15
27	10	10	9	9	14	16	19	20	23	23	23	23	26	26	26	27	26	27	27	27	21	18	18	18	20
28	16	18	18	18	14	14	14	18	21	21	22	22	23	23	23	23	20	18	18	17	15	14	14	13	18
29	12	10	10	9	8	8	9	12	18	21	22	16	16	18	14	13	13	12	12	12	12	11	11	10	13
30	9	9	9	8	8	7	9	13	18	20	21	21	19	18	22	23	23	24	24	21	17	13	12	11	16
MEAN	10	8	8	7	7	7	9	14	17	19	20	21	21	22	23	23	22	22	22	20	17	14	13	11	16

TOTAL NUMBER OF OBSERVATIONS = 720

NOTE: **** = MISSING DATA

DELTA TEMPERATURE 60-10 M
DEG. C*100

CB-TRACT
TRAILER 23
JUNE 1978.
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
2	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
3	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
4	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
5	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
6	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
7	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
8	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
9	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
10	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
11	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
12	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
13	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
14	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
15	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
16	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
17	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
18	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
19	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
20	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	0	-6	0	-6	-6	-11	-6	-6	-6	-6	0	-6	-4	0
21	-6	0	0	0	-6	0	6	6	0	-6	-6	-11	-25	(MT)	(MT)	-106	-56	-50	-28	56	275	322	300	222	41	322
22	181	181	97	106	83	95	208	-44	409	-50	-67	-72	-75	-50	-56	-25	-22	17	0	111	225	256	275	275	86	409
23	300	300	234	250	175	125	25	0	-8	-42	-64	-75	-72	-75	-50	-25	-28	-44	-22	6	100	153	175	250	66	300
24	178	200	178	200	125	111	81	-25	-42	-44	-50	-75	-56	-69	-50	-28	-25	17	0	6	28	6	0	0	28	200
25	6	25	69	69	61	78	50	25	-61	-97	-100	-75	-56	-50	-67	-25	-39	-28	-28	25	78	100	78	97	6	100
26	97	78	100	106	133	75	25	-44	-50	-56	-75	-75	-78	-78	-72	-44	-50	-44	-22	25	231	250	200	150	33	250
27	200	175	200	128	153	122	0	-50	-78	-50	-50	-50	-72	-56	-44	-69	-44	-44	-28	22	122	106	100	47	31	200
28	56	75	50	128	125	81	0	-39	(PF)	(PF)	-75	-75	-75	-56	-56	-56	-50	-42	-44	-25	-6	0	25	-6	-3	128
29	78	89	111	125	147	106	111	-25	-44	-64	-33	42	-6	-64	-6	100	17	25	56	50	22	56	50	78	42	147
30	100	125	203	175	245	225	100	-25	-31	-56	-56	-6	28	50	-50	-50	-44	-42	-25	76	350	175	200	334	83	350
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	300	300	234	250	245	225	208	25	409	-6	-6	42	28	50	0	100	17	25	56	111	350	322	300	334		409

REL HUMIDITY
PERCENT

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	38	44	50	50	51	53	62	65	67	56	48	43	40	32	31	26	25	24	23	22	25	30	35	38	41	67
2	42	48	52	57	60	62	65	63	56	45	39	36	32	30	28	27	28	28	32	37	40	43	45	50	44	65
3	58	67	73	78	82	86	87	78	71	63	55	47	47	51	38	40	71	61	54	59	64	67	73	65	64	87
4	81	81	81	82	83	71	72	67	59	56	54	49	68	53	43	38	37	38	48	57	80	86	86	86	65	86
5	90	95	95	95	95	96	96	95	71	60	49	46	47	68	84	67	75	56	58	70	72	84	89	89	77	96
6	90	91	93	93	93	93	93	85	70	58	52	44	38	29	22	27	29	27	27	39	45	54	60	62	59	93
7	69	71	71	69	69	70	71	70	53	44	38	31	29	36	32	35	31	28	26	43	42	45	52	54	49	71
8	58	59	60	60	64	65	65	63	48	41	32	25	25	23	21	20	21	24	26	26	28	40	45	46	41	65
9	47	49	48	48	48	51	53	55	38	29	25	23	23	19	18	17	16	15	16	18	21	21	21	22	31	55
10	28	31	31	30	27	25	25	27	26	23	23	20	19	17	15	12	12	13	13	13	13	13	13	14	20	31
11	18	31	39	45	51	57	65	66	60	54	48	42	33	20	17	16	16	15	14	13	14	16	23	29	33	66
12	35	42	45	49	52	55	58	58	49	41	37	32	23	23	24	21	15	14	14	14	15	24	30	30	33	58
13	29	30	29	30	31	32	31	29	30	30	29	28	28	23	20	20	16	15	15	15	15	20	26	23	25	32
14	21	21	22	25	27	28	28	30	29	27	26	26	24	24	25	24	23	22	20	21	21	22	26	28	25	30
15	31	32	36	31	29	28	28	30	31	27	23	20	21	19	18	17	16	15	14	13	14	15	17	18	23	36
16	22	25	27	26	27	30	30	34	36	23	22	20	20	18	17	16	15	14	15	16	19	23	27	31	23	36
17	35	42	48	51	54	64	68	64	56	50	46	41	37	27	21	17	17	15	15	16	19	27	32	34	37	68
18	36	41	44	47	48	49	51	52	51	42	29	22	20	20	18	17	18	19	19	19	(RF)	(RF)	(RF)	(RF)	33	52
19	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
21	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	18	18	17	17	17	18	23	26	27	( )	27
22	30	33	35	38	40	43	43	49	43	36	33	28	27	25	23	20	20	19	19	19	20	25	28	30	30	49
23	32	34	37	38	40	40	40	37	33	29	28	27	26	24	22	22	21	21	21	21	22	25	28	29	29	40
24	30	32	34	36	38	40	43	44	45	38	36	35	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	45
25	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
26	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	54	47	41	37	28	26	25	23	21	21	20	22	25	36	38	41	( )	54
27	42	43	43	42	41	41	43	43	43	40	37	36	36	31	28	30	28	28	28	27	27	34	36	39	36	43
28	39	40	42	45	45	48	51	51	49	46	45	45	43	39	39	40	40	48	59	61	66	71	72	74	50	74
29	77	79	83	85	87	87	86	85	80	60	48	42	48	65	68	70	90	91	87	85	84	75	76	82	76	91
30	80	80	80	80	82	82	82	75	65	54	43	38	47	75	38	31	28	25	25	16	30	34	33	31	52	82
AV	46	50	52	53	55	56	57	57	51	43	38	34	33	33	29	27	29	27	28	30	34	38	41	43	42	
PK	90	95	95	95	95	96	96	95	80	63	55	49	68	75	84	70	90	91	87	85	84	86	89	89		96

BAROMETRIC PRESS
MILLIBARS

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	784	784	784	784	784	785	785	785	785	785	785	784	784	784	783	783	783	782	782	783	783	783	783	783	784	785
2	783	783	783	783	783	783	783	785	787	788	788	788	787	787	787	787	787	786	786	786	788	787	788	789	786	789
3	789	789	789	789	789	789	790	790	790	791	791	790	790	790	790	789	790	790	790	790	790	791	792	792	790	792
4	792	792	792	791	791	790	790	790	790	790	790	790	790	789	789	788	789	789	789	790	791	791	791	790	790	792
5	790	790	789	788	789	789	790	790	790	789	789	789	789	789	790	790	789	789	789	789	790	790	790	790	789	790
6	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	789	789	790	790	790	790	790	790	790	790
7	791	791	791	791	791	791	792	792	792	792	792	791	791	791	790	790	790	790	791	791	791	791	792	792	791	792
8	792	792	792	792	792	792	793	793	793	793	794	793	793	792	792	790	790	790	791	791	791	792	791	791	792	794
9	791	791	791	791	791	791	791	791	791	790	790	790	789	789	788	788	787	787	787	787	787	787	787	787	789	791
10	786	786	786	785	785	785	785	785	785	785	785	785	784	783	783	783	783	783	783	783	783	783	783	783	784	786
11	785	786	787	788	788	789	790	789	790	790	790	790	791	791	791	791	791	791	792	792	793	793	794	794	790	794
12	794	794	794	794	794	795	795	795	795	795	794	794	794	794	794	793	793	793	793	793	793	793	793	793	794	795
13	793	793	793	793	793	793	794	794	794	793	793	793	793	792	792	793	791	790	790	790	790	790	790	790	792	794
14	790	790	790	790	790	790	791	791	791	791	791	791	790	790	790	790	789	789	788	788	788	788	788	788	790	791
15	788	788	788	788	788	788	789	789	789	789	789	789	789	786	785	785	784	784	784	785	786	787	787	787	787	789
16	787	787	787	787	787	787	787	(MT)	789	789	789	789	789	788	788	787	787	787	788	788	788	789	790	790	788	790
17	791	792	792	792	793	793	793	794	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	794	795
18	795	795	795	794	794	794	794	794	794	793	792	792	791	791	791	790	789	789	788	787	787	787	787	787	791	795
19	787	787	787	788	788	788	788	789	789	789	789	789	789	789	788	788	788	788	788	789	790	790	790	791	789	791
20	791	791	791	791	791	792	792	793	793	792	792	792	792	792	791	791	790	790	790	790	790	790	791	791	791	793
21	791	790	790	790	790	790	790	790	790	791	791	790	790	790	790	789	789	789	789	789	788	788	788	788	790	791
22	788	788	788	786	788	789	789	790	789	789	789	789	789	789	789	789	788	788	788	788	788	788	788	788	789	790
23	788	788	788	788	788	789	789	790	790	790	790	790	790	790	790	790	789	789	789	789	789	789	789	789	789	790
24	789	789	789	789	789	789	789	789	789	790	789	789	789	788	787	787	786	785	785	785	785	785	785	785	783	790
25	785	785	785	785	785	785	785	786	786	786	786	786	786	785	785	785	785	785	785	785	785	785	786	786	785	786
26	786	786	786	786	787	787	788	788	788	788	788	788	787	786	786	786	786	786	786	786	786	786	786	786	787	788
27	786	786	786	787	788	788	788	789	790	791	790	790	790	789	789	789	789	788	788	788	788	789	789	789	789	791
28	789	789	789	789	789	790	790	790	(PF)	(PF)	(PF)	(PF)	(PF)	791	791	792	792	792	792	792	793	793	793	793	791	793
29	793	793	792	792	792	792	793	793	793	793	792	792	792	792	793	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	792	793
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	789	789	789	789	789	789	790	790	790	790	790	790	790	789	789	789	789	788	788	789	789	789	789	789	789	
PK	795	795	795	794	794	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795		795

PRECIPITATION
CM *100

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1	(TR)	(TR)	(TR)															(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
2	(TR)	(TR)	(TR)	3										(TR)	(TR)	(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	(TR)	3	8	3
3	(TR)	(TR)										3				(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
4	(TR)	(TR)	(TR)	(TR)	(TR)	3					5	8				(TR)	(TR)	(TR)	3	3	3	(TR)	(TR)	3	25	8
5	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)							76	30	3	(TR)								109	76
6																				(TR)	(TR)	(TR)	(TR)	(TR)		
7	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3													(TR)	(TR)	(TR)	(TR)	(TR)	3	3
8	(TR)	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	(TR)	(TR)	3	3
9	(TR)	(TR)	3															(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	5	3
10																				(TR)	(TR)	(TR)	(TR)	(TR)		
11	(TR)	(TR)	(TR)	(TR)	(TR)	3												(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	5	3
12	3	(TR)	(TR)	(TR)	3	(TR)												(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		5	3
13																				(TR)	3	(TR)			3	3
14																				(TR)	(TR)	(TR)				
15																		(TR)	(TR)	(TR)	(TR)					
16																		(TR)	(TR)	3	(TR)	3			5	3
17																(TR)	(TR)	(TR)	3	(TR)	(TR)	3			5	3
18															(TR)	(TR)	(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	3	5	3
19														(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
20															(TR)	(TR)	(TR)	(TR)	(TR)	3	(TR)	3	(TR)	3	8	3
21																			(TR)	3	(TR)	(TR)	(TR)	(TR)	3	3
22	(TR)	(TR)	(TR)	(TR)	3															(TR)	(TR)	(TR)	(TR)	3	5	3
23	(TR)	(TR)	(TR)	(TR)	3									(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)				3	3
24																(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)				
25														(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3	3
26	(TR)	(TR)	(TR)	3	(TR)	(TR)	3								(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	5	3
27	3																	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	5	3
28																	3		(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
29	(TR)	(TR)	(TR)	(TR)	(TR)	3						13	(TR)	(TR)	20	3									38	20
30																			(TR)	(TR)	(TR)	3			3	3
TL	5		3	5	8	10	5				5	23		76	51	5	3		8	13	8	10		20	257	
PK	3		3	3	3	3	3				5	13		76	30	3	3		3	3	3	3		3		76

PRECIPITATION
CM *100

CB-TRACT
TRAILER 23
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1																										
2																										
3																8				(TR)	(TR)	(TR)			8	8
4																	(TR)	(TR)	3	3					5	3
5														18	20	(TR)	(TR)		(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	38	20
6	(TR)	(TR)	(TR)	(TR)	(TR)	3									3										5	3
7																(TR)	(TR)	(TR)	(TR)							
8																					(TR)	(TR)	(TR)	3	3	3
9																										
10																			(TR)	(TR)	(TR)	(TR)	(TR)	3	3	3
11	(TR)	(TR)	(TR)	(TR)	(TR)	3									(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	(TR)	5	3
12	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3																	3	3
13																										
14																			(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
15	3																			(TR)	(TR)	(TR)	(TR)	3	5	3
16																						(TR)	(TR)	(TR)		
17	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)												(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3	3
18	(TR)	(TR)	(TR)	(TR)	(TR)	3													(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
19	3	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3																	5	3
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																		(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
28														(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
29	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)				(TR)	3	(TR)	(TR)	15	5	3								25	15
30												13	8	(TR)											20	13
TL	5					8		5				15	8	18	38	13	3		3	3			3	10	130	
PK	3					3		3				13	8	18	20	8	3		3	3			3	3		20

Evaporation Data

C-b Tract
Trailer 23
June 1978
Occidental Oil Shale, Inc.

Sample Period	Total Evaporation (cm)	Precipitation (cm)	Total Wind (km)	Max. Temp. (c)	Min. Temp. (c)
5/31-6/2	1.14		147.7	23	1
3- 5	1.06	.13	244.9	30	2
6- 7	.39	.43	106.6	25	2
8- 9	1.13	.03	122.4	25	4
10- 12	3.05	.11	404.8	25	4
13- 14	1.67		254.3	27.5	11
15- 16	2.44	.05	258.7	27	8
17- 19	3.03	.11	305.3	26.5	4
20- 21	1.50		143.3	30	5
22- 23	1.62		131.4	28	10
23- 26	3.06		322.7	27	6
27- 28	1.57		192.0	29.5	12
29- 30	.26	.45	140.6	22	9

MIXING HEIGHT
METERS

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
2	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
3	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
4	30	30	30	30	30	30	30	60	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	60
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(OS)	(OS)	(OS)	(OS)	30	30	30	(OS)	30	30	30	30	30	( )	30
6	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
7	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
8	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
9	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
10	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
11	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
12	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
13	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
14	30	30	30	30	(RF)	(RF)	30	(RF)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(RF)	(RF)	(OS)	(RF)	(RF)	30	30	30	( )	30
15	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	30
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	( )	30
24	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
25	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
26	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
27	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	( )	30
28	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
29	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	30
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	30	30	30	30	30	30	30	32	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	30	30	30	30	30	30	
PK	30	30	30	30	30	30	30	60	30	( )	( )	( )	( )	( )	( )	30	30	30	30	30	30	30	30	30		60

INVERSION HEIGHT
METERS

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	180	200	210	220	230	210	180	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	170	280	350	340	219	350
2	200	220	240	300	280	230	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	160	250	250	240	217	300
3	320	240	230	250	300	350	280	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	180	230	390	410	264	410
4	480	500	420	300	300	370	340	1300	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	1300
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(NV)	(NV)	(NV)	(NV)	280	180	220	(NV)	110	230	370	430	380	( )	430
6	450	490	440	370	320	260	250	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	65	300	390	410	380	327	490
7	410	350	290	310	380	350	280	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	350	430	430	330	332	430
8	320	320	360	290	310	320	230	180	70	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	160	240	310	300	290	264	360
9	320	310	290	260	330	360	300	200	50	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	150	180	140	220	360	235	360
10	230	220	210	200	190	200	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	100	100	190	310	178	310
11	260	160	180	270	360	310	200	80	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	160	180	180	180	200	360
12	230	290	260	240	250	230	180	60	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	40	150	200	220	230	198	290
13	250	230	210	210	220	230	210	90	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	210	270	270	207	270
14	270	280	270	230	(RF)	(RF)	230	(RF)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(RF)	(RF)	(NV)	(RF)	(RF)	160	200	200	( )	280
15	230	230	230	220	210	200	180	100	(NV)	(NV)	(NV)	(NV)	(NV)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	230
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	310	320	300	( )	320
24	280	330	350	370	370	400	330	160	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	160	200	220	200	281	400
25	200	240	250	230	230	170	140	200	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	170	230	240	250	194	250
26	300	310	320	390	440	390	220	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	90	250	350	380	300	295	440
27	410	340	340	300	260	230	240	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	250	370	340	460	( )	460
28	410	440	420	320	280	330	330	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	350	320	330	240	305	440
29	540	650	570	490	460	400	320	380	250	(NV)	(NV)	(NV)	(NV)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	650
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	315	318	305	289	301	292	234	225	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	100	204	267	298	298	248	
PK	540	650	570	490	460	400	340	1300	250	( )	( )	( )	( )	( )	( )	280	180	220	60	200	350	430	430	460		1300

STABILITY CLASS 0=STB 1=UNST
@50 METERS

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	(RF)	(RF)	(RF)	(RF)	(RF)	1
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	1	1	0	0	0	1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
11	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
13	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
14	0	0	0	0	(RF)	(RF)	0	(RF)	1	1	1	1	1	1	1	1	(RF)	(RF)	1	(RF)	(RF)	0	0	0	1
15	0	0	0	0	0	0	0	1	1	1	1	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
18	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1	1	1	1	1	1	1	0	0	0	0	( )
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
26	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
27	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
28	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
PV	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1

STABILITY CLASS 0=STB 1=UNST
@200 METERS

CB-TRACT
TRAILER 20
JUNE 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
2	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
3	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	(RF)	(RF)	(RF)	(RF)	(RF)	1
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	1	1	0	1	0	1	1	0	0	0	0	1
6	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
7	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
8	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
9	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
10	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
11	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
13	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
14	0	0	0	1	(RF)	(RF)	0	(RF)	1	1	1	1	1	1	1	1	(RF)	(RF)	1	(RF)	(RF)	1	1	1	1
15	0	0	0	0	0	0	1	1	1	1	1	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
18	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1	1	1	1	1	1	1	1	0	0	0	( )
24	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
25	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
26	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
27	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
28	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
29	0	0	0	0	0	0	0	0	0	1	1	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
PV	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1

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C-B PIBAL SOUNDING

SOUNDING DATE  6- 1-78

BALLOON RELEASED  545 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                   THEODOLITE #1               THEODOLITE #2

   TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0             59.5       -0.0        0.0
   0.5          72.1       67.5             60.0        2.9        5.3
   1.0          78.8       48.5             61.2        4.9        5.1
   1.5          89.2       41.7             63.3        7.2        5.0
   2.0          94.0       42.6             65.1        8.9        4.1
   2.5         101.6       43.4             67.0       10.7        3.5
   3.0         102.2       44.6             68.1       12.4        3.4
   3.5         105.8       47.0             69.2       14.2        3.5
   4.0         112.1       48.7             71.0       16.1        3.8
   4.5         120.5       51.0             73.0       18.3        4.2
   5.0         128.4       51.0             75.7       20.4        4.0
   5.5         135.4       50.4             78.7       22.5        3.9
   6.0         141.1       50.9             80.7       24.5        3.7
   6.5         146.1       51.3             82.8       26.6        3.9
   7.0         150.9       52.0             84.7       28.8        4.0
   7.5         155.0       54.2             85.3       31.3        4.2
   8.0         156.5       57.8             84.2       33.7        4.2
   8.5         153.8       62.1             82.0       35.6        3.9
   9.0         141.1       66.9             80.6       37.3        3.6
   9.5         116.9       68.6             79.9       38.2        3.3
  10.0          97.7       67.9             77.6       40.0        3.0
  10.5          85.2       63.7             77.1       41.9        2.3
  11.0          75.6       61.0             78.3       43.0        1.7
  11.5          71.3       56.4             78.8       45.0        1.0
  12.0          69.2       52.3             79.7       46.3        0.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        14.1        5.2
     2         1.9        5.9
     3        70.4        6.6
     4        46.3        7.1
     5        76.0        7.4
     6        65.8        7.8
     7        67.5        8.1
     8        68.5        8.3
     9        61.9        8.4
    10        70.3        8.7
    11        79.7        9.0
    12        85.6        9.2
    13        85.8        9.4
    14        78.4        9.6
    15        64.2        9.7
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16       40.1         9.9
17       23.1        10.2
18      179.1        11.3
19      564.7        13.2
20      750.8        15.5
21     1038.0        19.9
22     2007.3        22.1
23     2936.5        26.3
24     3974.4        17.7


        HEIGHT   DIRECTION   SPEED   TEMP
         FEET     DEGREES    FT/SEC  DEG C

          384.      258.        9.0    5.3
          609.      272.       13.4    5.1
          864.      286.       11.1    5.0
         1087.      308.        7.7    4.1
         1291.      306.        6.8    3.5
         1530.      306.        4.8    3.4
         1753.      344.        5.6    3.5
         1979.        3.        7.7    3.8
         2215.        5.        9.6    4.2
         2447.      360.       11.0    4.0
         2683.        8.        9.8    3.9
         2884.       19.        8.5    3.7
         3105.       24.        8.2    3.9
         3329.       46.        6.7    4.0
         3576.       97.        4.9    4.2
         3852.      163.        5.9    4.2
         4171.      214.       10.9    3.9
         4812.      237.       22.7    3.6
         5728.      237.       30.9    3.3
         6822.      243.       44.5    3.0
         8805.      245.       45.0    2.3
         9740.      244.       45.4    1.7
        11498.       94.       18.8    1.0


        HEIGHT   DIRECTION   SPEED   TEMP
        METERS    DEGREES    M/SEC   DEG C

          117.      258.        2.7    5.3
          185.      272.        4.1    5.1
          263.      286.        3.4    5.0
          331.      308.        2.3    4.1
          394.      306.        2.1    3.5
          466.      306.        1.5    3.4
          534.      344.        1.7    3.5
          603.        3.        2.3    3.8
          675.        5.        2.9    4.2
          746.      360.        3.4    4.0
          818.        8.        3.0    3.9
          879.       19.        2.6    3.7
          946.       24.        2.5    3.9
         1015.       46.        2.0    4.0
         1090.       97.        1.5    4.2
         1174.      163.        1.8    4.2
         1271.      214.        3.3    3.9
         1467.      237.        6.9    3.6
         1746.      237.        9.4    3.3
         2079.      243.       13.6    3.0
         2684.      245.       13.7    2.3
         2969.      244.       13.8    1.7
         3505.       94.        5.7    1.0
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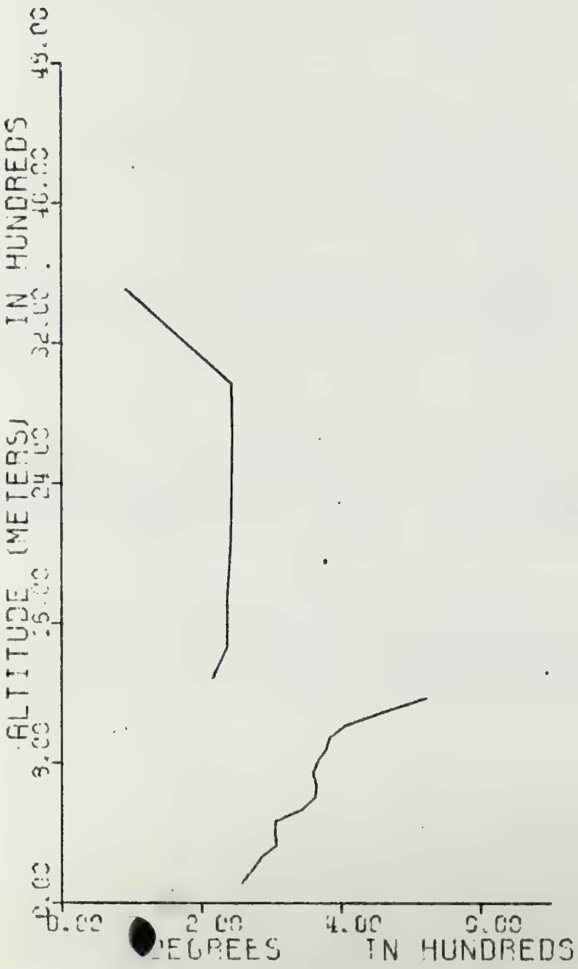
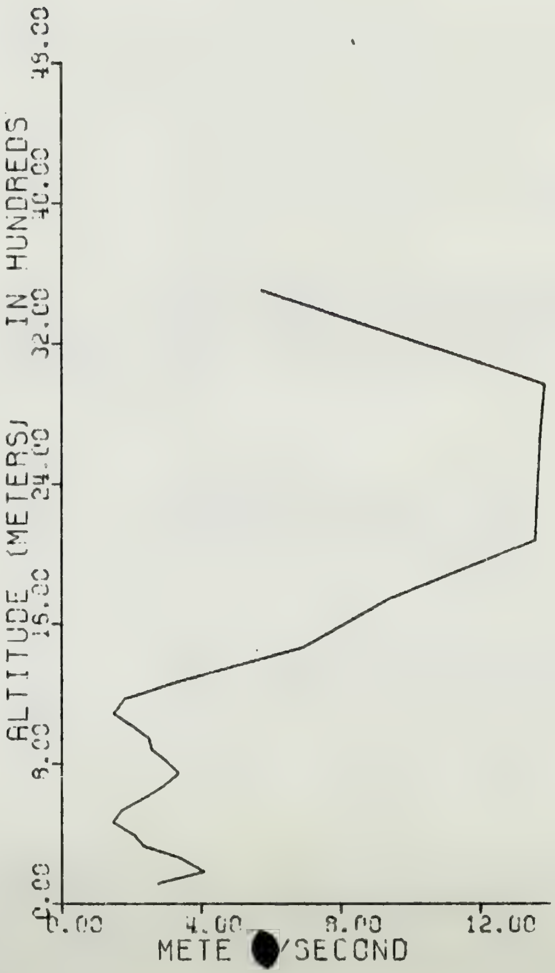
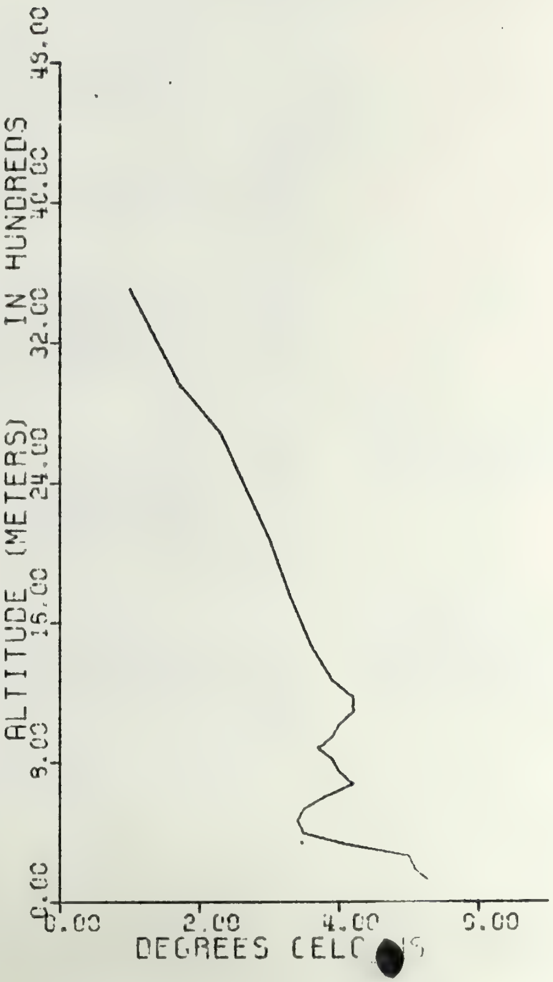
C-B PIBAL SOUNDING

TIME 545   DATE 6/1/79


WIND DIRECTION

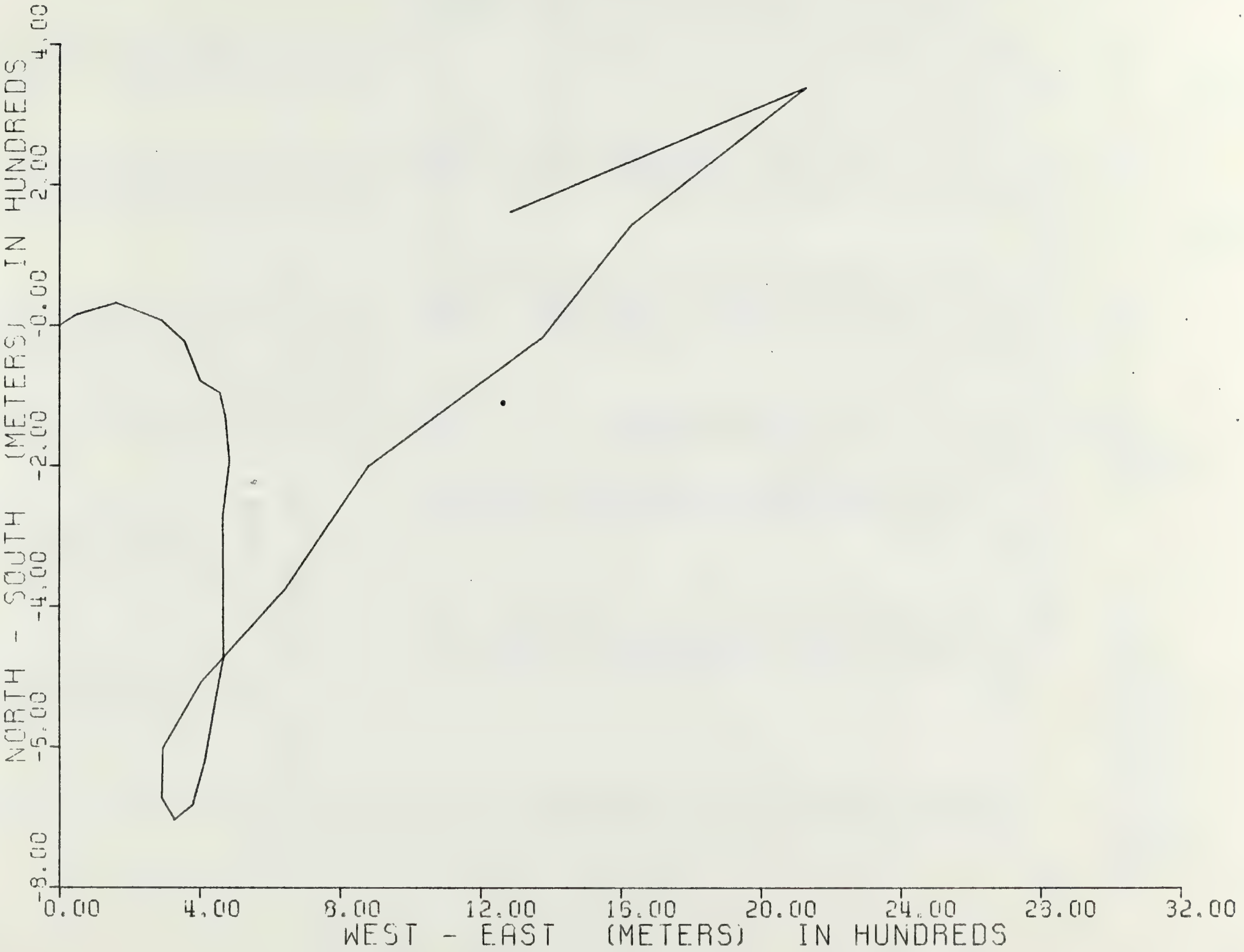

WIND SPEED


TEMPERATURE

C-B PIBAL SOUNDING

TIME 545   DATE 6/1/78

PIBAL TRAJECTORY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 1-78

BALLOON RELEASED 1400 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                      THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0            0.0        0.0            59.5       -0.0         0.0
   0.5           98.1       50.6            61.7        4.3        18.3
   1.0           99.0       44.6            63.9        7.1        16.9
   1.5          102.2       46.2            66.7       11.0        15.4
   2.0          102.4       46.3            68.5       13.7        13.9
   2.5          104.5       46.7            70.6       16.3        12.5
   3.0          106.5       44.4            73.2       17.8        11.0
   3.5          112.3       43.8            77.1       20.2        10.2
   4.0          115.0       43.8            79.6       22.0         9.3
   4.5          115.3       44.3            80.4       23.2         8.5
   5.0          116.0       45.3            80.9       24.5         7.6
   5.5          115.0       46.6            81.0       25.7         6.8
   6.0          113.0       49.2            79.6       27.2         6.0
   6.5          109.0       50.4            78.8       28.1         5.1
   7.0          102.5       51.7            75.9       28.6         4.8
   7.5           94.2       53.0            73.0       29.3         4.6
   8.0           87.0       54.4            69.5       30.2         3.9
   8.5           77.6       53.6            66.7       30.1         3.2
   9.0           71.6       51.7            64.5       29.8         2.5
   9.5           65.3       48.2            62.0       29.0         1.8
  10.0           60.6       45.5            59.6       28.2         1.1
  10.5           57.1       42.8            57.5       27.3         0.4
  11.0           54.1       40.2            55.8       26.5        -0.5
  11.5           51.6       37.7            53.9       25.6        -1.4
  12.0           48.7       35.3            52.4       25.0        -2.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      46.3        5.6
     2      72.7        6.4
     3      60.3        7.3
     4      66.5        8.1
     5      68.9        8.8
     6      77.1        9.7
     7      82.7       10.6
     8      86.2       11.3
     9     104.0       11.8
    10     132.4       12.1
    11     116.1       12.5
    12     142.6       12.7
    13      91.0       13.3
    14     131.6       13.6
    15      98.0       14.2
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16     189.1       14.5
17      90.2       15.4
18      91.2       16.4
19      79.1       18.0
20      99.5       19.3
21     140.0       20.7
22     110.1       22.5
23     161.0       24.3
24      22.6       27.0


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC DEG C

          514.     279.      13.7  18.3
          825.     284.      13.9  16.9
         1319.     286.      13.2  15.4
         1705.     289.      11.9  13.9
         2106.     295.      14.0  12.5
         2413.     308.      17.1  11.0
         2848.     317.      16.1  10.2
         3208.     311.       9.6   9.3
         3452.     307.       4.6   8.5
         3676.     289.       3.2   7.6
         3948.     196.       3.2   6.8
         4184.     202.       6.4   6.0
         4502.     204.      11.1   5.1
         4668.     193.      16.1   4.8
         4983.     186.      16.9   4.6
         5213.     191.      19.5   3.9
         5510.     207.      22.8   3.2
         5767.     215.      29.0   2.5
         6129.     214.      33.0   1.8
         6352.     211.      30.8   1.1
         6556.     213.      34.0   0.4
         6849.     214.      38.1  -0.5
         7123.     213.      45.7  -1.4


        HEIGHT  DIRECTION   SPEED  TEMP
        METERS   DEGREES    M/SEC  DEG C

          157.     279.       4.2  18.3
          251.     284.       4.2  16.9
          402.     286.       4.0  15.4
          520.     289.       3.6  13.9
          642.     295.       4.3  12.5
          736.     308.       5.2  11.0
          868.     317.       4.9  10.2
          978.     311.       2.9   9.3
         1052.     307.       1.4   8.5
         1121.     289.       1.0   7.6
         1203.     196.       1.0   6.8
         1275.     202.       2.0   6.0
         1372.     204.       3.4   5.1
         1423.     193.       4.9   4.8
         1519.     186.       5.2   4.6
         1589.     191.       5.9   3.9
         1679.     207.       6.9   3.2
         1758.     215.       8.8   2.5
         1868.     214.      10.1   1.8
         1936.     211.       9.4   1.1
         1998.     213.      10.4   0.4
         2088.     214.      11.6  -0.5
         2171.     213.      13.9  -1.4
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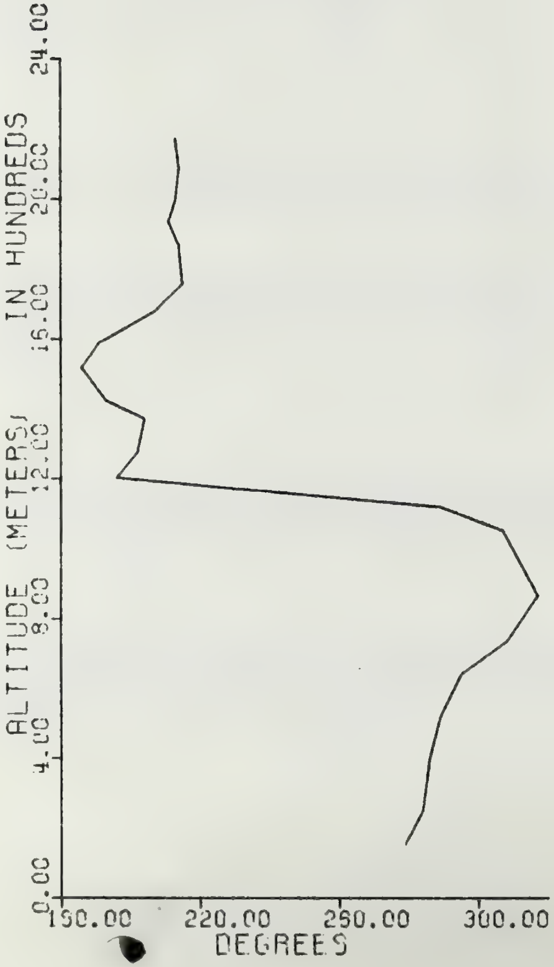
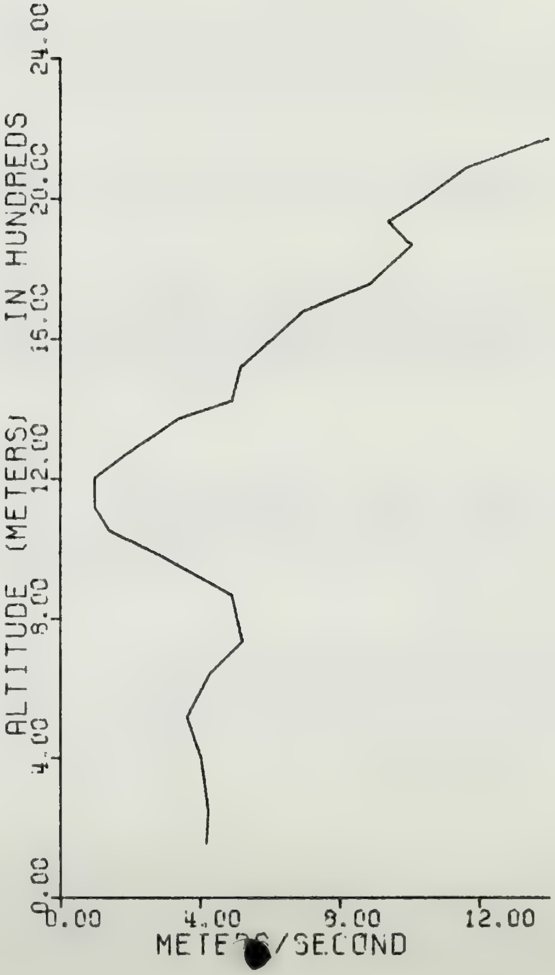
C-B PIBAL SOUNDING

TIME 1400 DATE 6/1/78

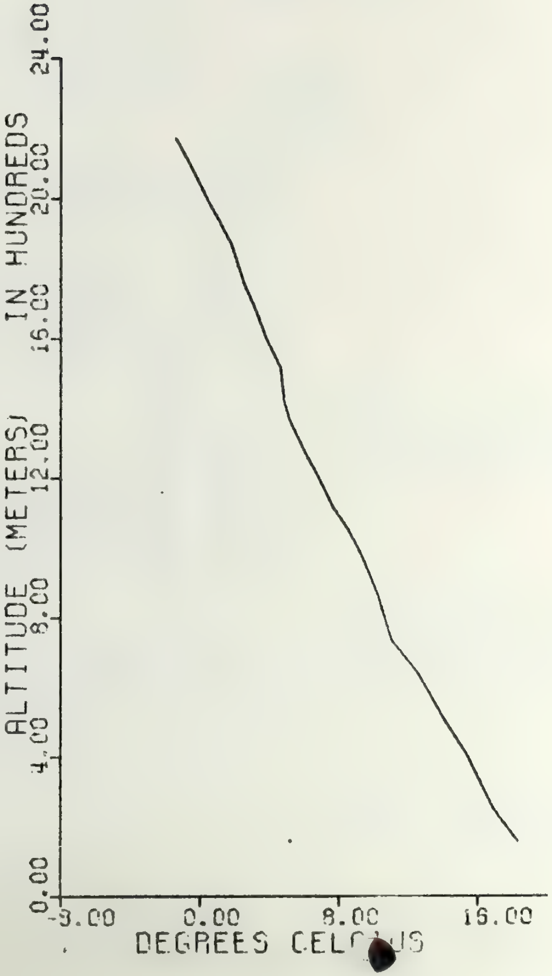
WIND DIRECTION



WIND SPEED



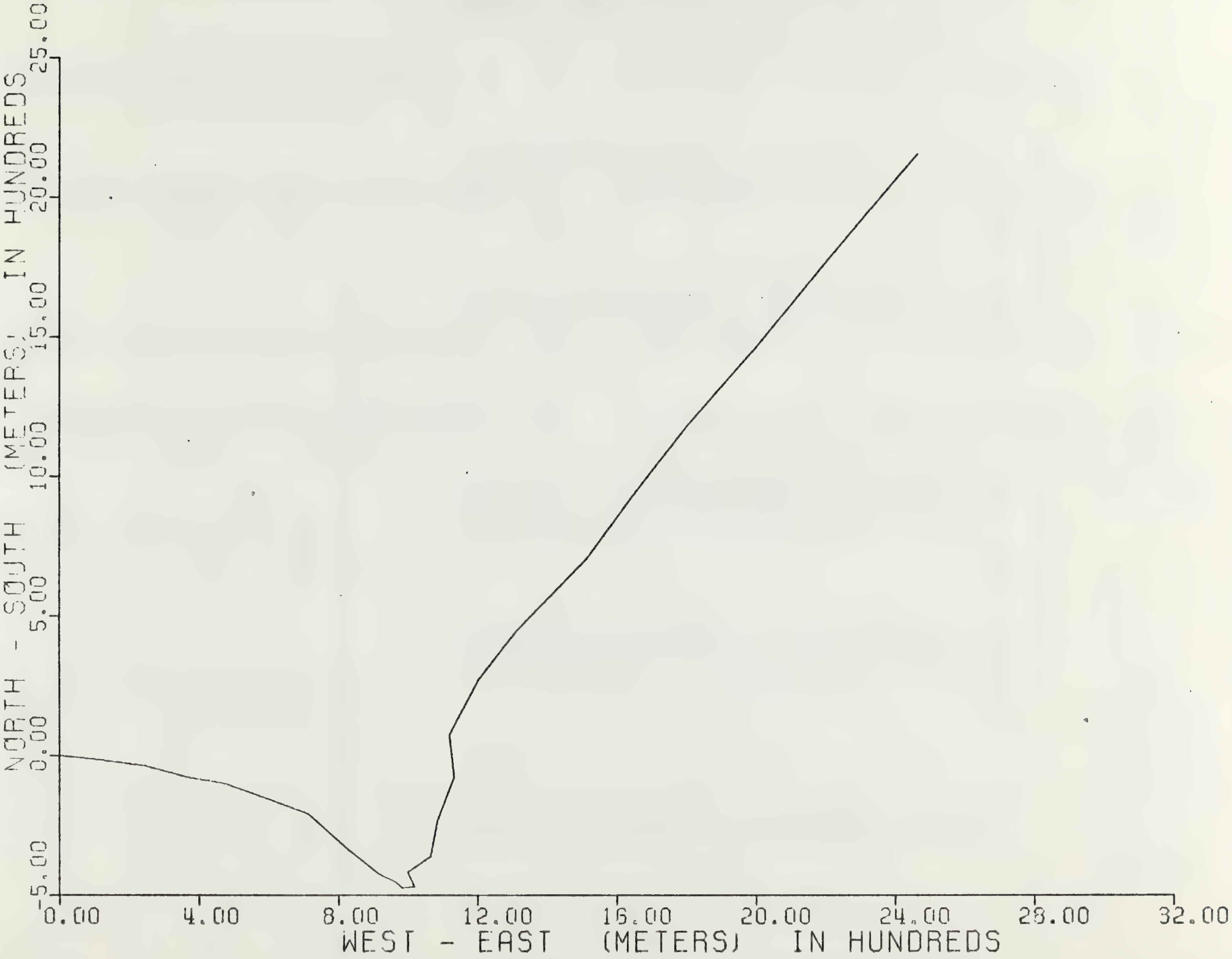
TEMPERATURE



C-B PIB[illegible] SOUNDING

TIME 1400 DATE 6/1/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 2-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           59.5       -0.0         0.0
   0.5         116.1       72.4           60.5        3.8        10.7
   1.0          94.1       56.4           61.9        6.9        12.2
   1.5          82.7       53.6           62.0        9.1        13.0
   2.0          84.9       63.7           62.1       11.9        13.1
   2.5         105.7       68.3           63.9       14.8        13.2
   3.0         124.6       66.3           66.4       18.1        13.8
   3.5         127.4       73.4           64.9       21.1        14.8
   4.0         159.0       85.8           60.7       25.1        15.0
   4.5         259.9       91.0           57.2       27.5        14.5
   5.0         312.7       79.7           52.1       29.2        13.7
   5.5           5.6       68.4           50.3       29.7        12.7
   6.0          20.1       62.3           47.7       29.7        11.8
   6.5          20.3       55.2           43.9       28.8        10.8
   7.0          20.7       52.9           42.5       28.2         9.8
   7.5          22.1       49.8           41.8       27.8         8.8
   8.0          23.8       46.8           41.3       27.2         7.8
   8.5          25.4       43.6           41.3       27.0         6.9
   9.0          26.1       41.8           41.9       26.7         5.9
   9.5          29.4       40.3           43.9       26.3         4.9
  10.0          31.9       39.0           44.9       25.9         3.9
  10.5          34.3       37.8           45.9       25.6         2.9
  11.0          37.1       36.5           46.9       25.3         2.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       26.3       5.2
     2       56.0       6.0
     3       45.0       6.6
     4       16.7       6.7
     5       22.9       6.9
     6       91.2       7.2
     7       95.2       7.4
     8       77.1       7.5
     9      237.6       8.0
    10      147.9       8.0
    11      167.4       9.8
    12       68.6      11.6
    13      167.3      13.2
    14      256.5      13.8
    15      230.2      15.0
    16      221.0      16.2
    17       65.7      17.9
```

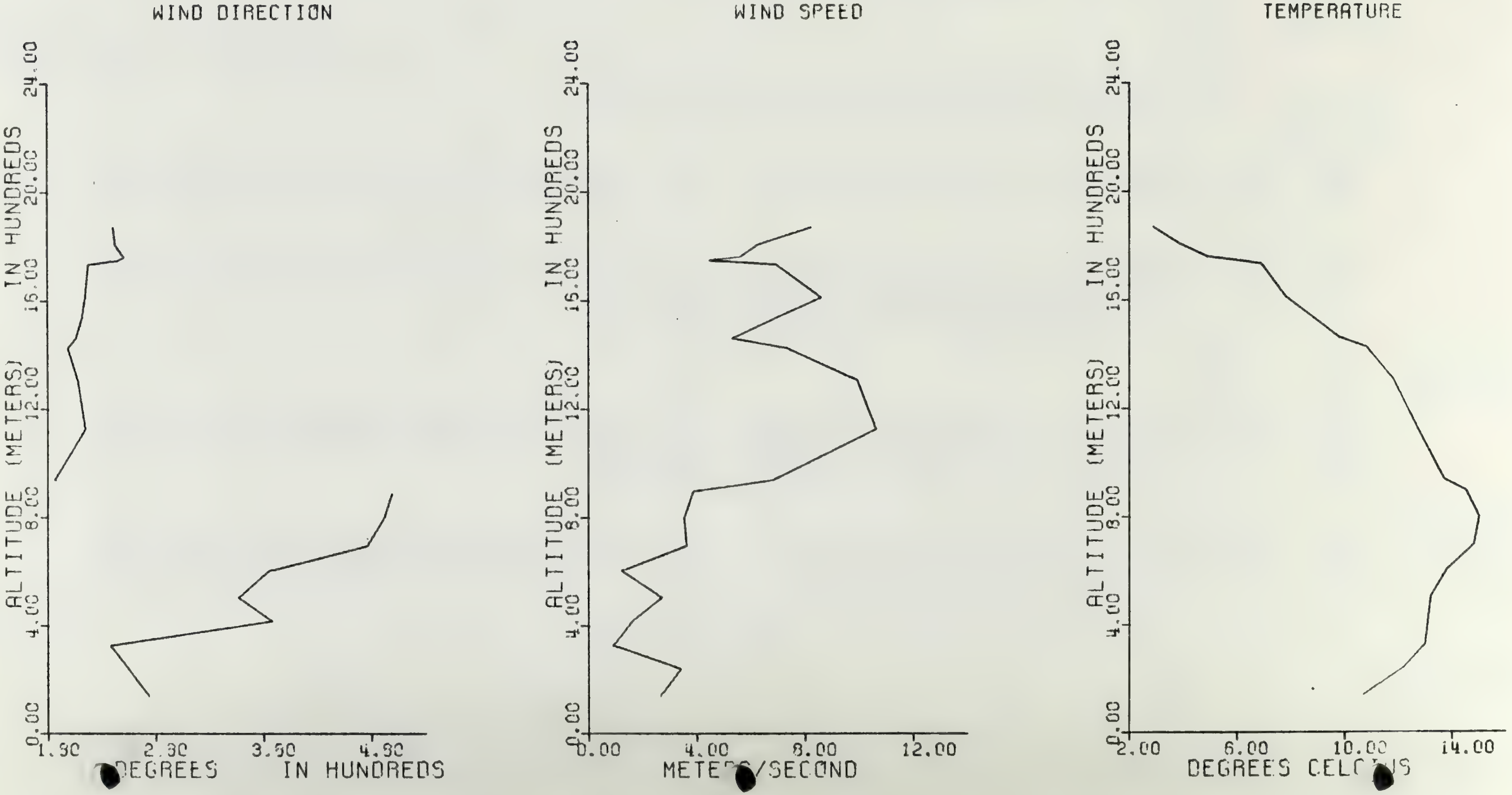
18	122.5	18.5
19	286.0	19.1
20	323.3	20.0
21	362.5	21.0
22	356.5	22.7

HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
460.	274.	8.7	10.7
792.	255.	11.2	12.2
1076.	238.	3.0	13.0
1371.	28.	5.3	13.1
1654.	357.	8.9	13.2
1981.	25.	4.0	13.8
2283.	116.	11.9	14.8
2623.	132.	11.6	15.0
2946.	140.	12.7	14.5
3081.	186.	22.3	13.7
3695.	215.	34.9	12.7
4291.	208.	32.6	11.8
4680.	199.	24.0	10.8
4796.	206.	17.4	9.8
5046.	212.	22.7	8.8
5288.	215.	28.2	7.8
5688.	218.	22.7	6.9
5737.	245.	14.6	5.9
5778.	251.	18.3	4.9
5929.	243.	20.5	3.9
6132.	241.	26.9	2.9

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
140.	274.	2.7	10.7
242.	255.	3.4	12.2
328.	238.	0.9	13.0
418.	28.	1.6	13.1
504.	357.	2.7	13.2
604.	25.	1.2	13.8
696.	116.	3.6	14.8
800.	132.	3.5	15.0
898.	140.	3.9	14.5
939.	186.	6.8	13.7
1126.	215.	10.6	12.7
1308.	208.	9.9	11.8
1426.	199.	7.3	10.8
1462.	206.	5.3	9.8
1538.	212.	6.9	8.8
1612.	215.	8.6	7.8
1734.	218.	6.9	6.9
1749.	245.	4.5	5.9
1761.	251.	5.6	4.9
1807.	243.	6.2	3.9
1869.	241.	8.2	2.9

C-B PIBAL SOUNDING

TIME 645   DATE 6/2/78


WIND DIRECTION

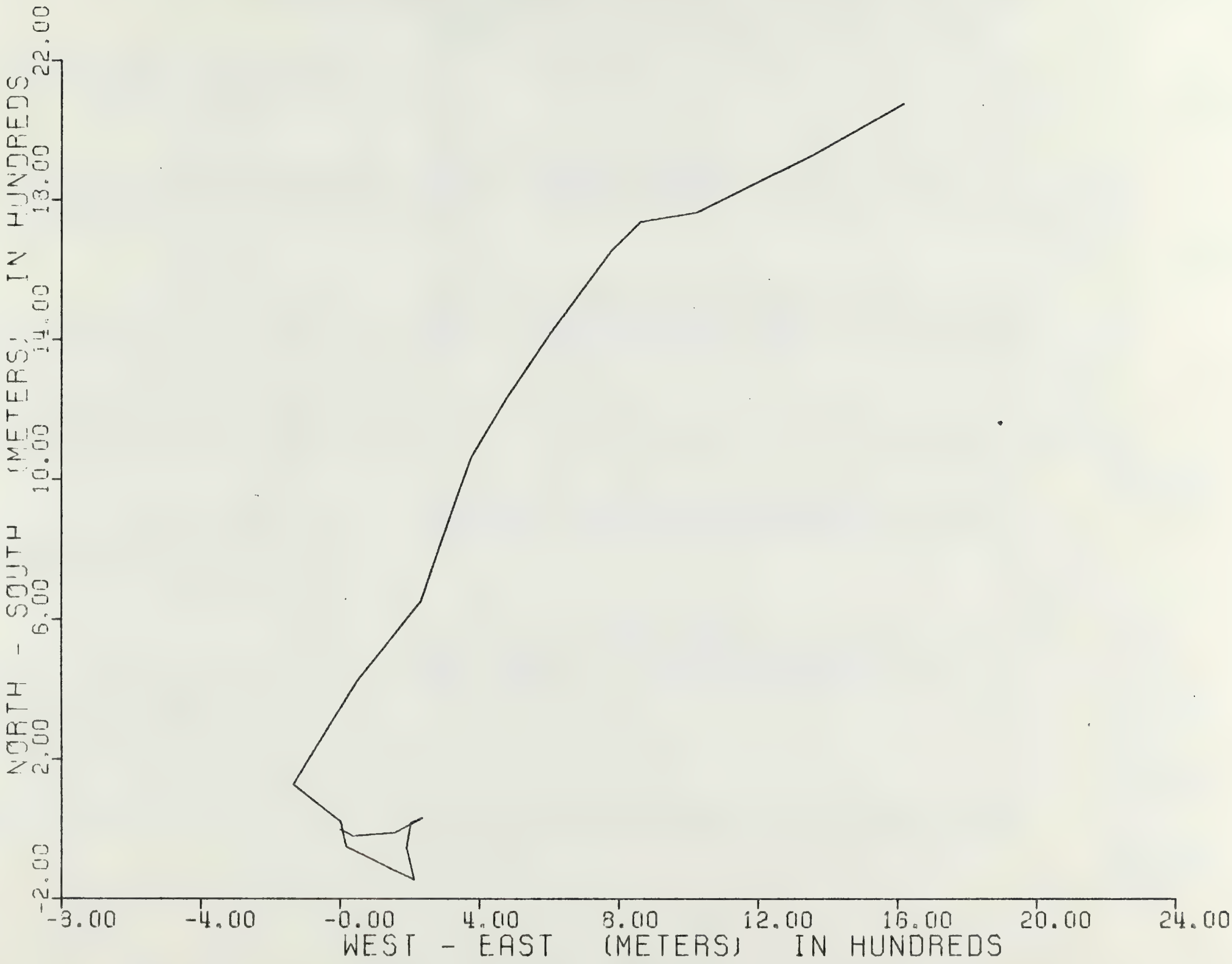
WIND SPEED

TEMPERATURE

C-B PIBAL SØUNDING

TIME 645 DATE 6/2/78

PIBAL TRAJECTØRY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 2-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                 THEODOLITE #1              THEODOLITE #2

  TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0           0.0        0.0            59.5       -0.0         0.0
  0.5         107.2       21.2            62.2        2.3        21.5
  1.0         114.1       23.7            66.7        4.4        20.0
  1.5         117.4       22.9            70.3        7.0        19.6
  2.0         117.0       22.7            72.7        7.2        19.2
  2.5         115.0       21.9            74.3        7.8        18.7
  3.0         114.3       21.7            76.0        8.5        18.3
  3.5         114.1       21.3            77.7        9.2        17.9
  4.0         114.1       21.1            79.3        9.9        17.5
  4.5         114.6       21.7            80.1       10.9        17.1
  5.0         115.3       22.5            82.9       11.9        16.6
  5.5         116.0       23.4            84.7       13.2        16.2
  6.0         117.0       23.1            86.3       14.2        15.7
  6.5         117.3       24.7            87.7       15.1        15.1
  7.0         118.1       25.8            88.9       16.3        14.6
  7.5         118.4       26.8            89.7       17.2        14.0
  8.0         118.3       28.0            90.1       18.4        13.4
  8.5         117.7       29.1            90.0       19.2        12.9
  9.0         116.7       30.0            89.6       19.8        12.3
  9.5         114.9       30.9            88.8       20.4        11.7
 10.0         112.7       31.9            87.8       21.1        11.1
 10.5         109.8       32.9            86.5       21.4        10.6
 11.0         107.3       33.5            85.1       22.0        10.0
 11.5         104.4       34.3            83.7       22.6         9.5
 12.0         102.1       35.1            82.6       22.1         9.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME       RHO       ERROR

    1      167.3        5.5
    2      138.5        6.3
    3      256.3        7.0
    4      167.0        7.6
    5      166.9        8.2
    6      162.2        8.8
    7      175.6        9.4
    8      190.7       10.1
    9      246.4       10.4
   10      178.9       11.5
   11      194.9       12.3
   12      292.1       12.9
   13      194.9       13.6
   14      207.2       14.2
   15      194.0       14.7
```

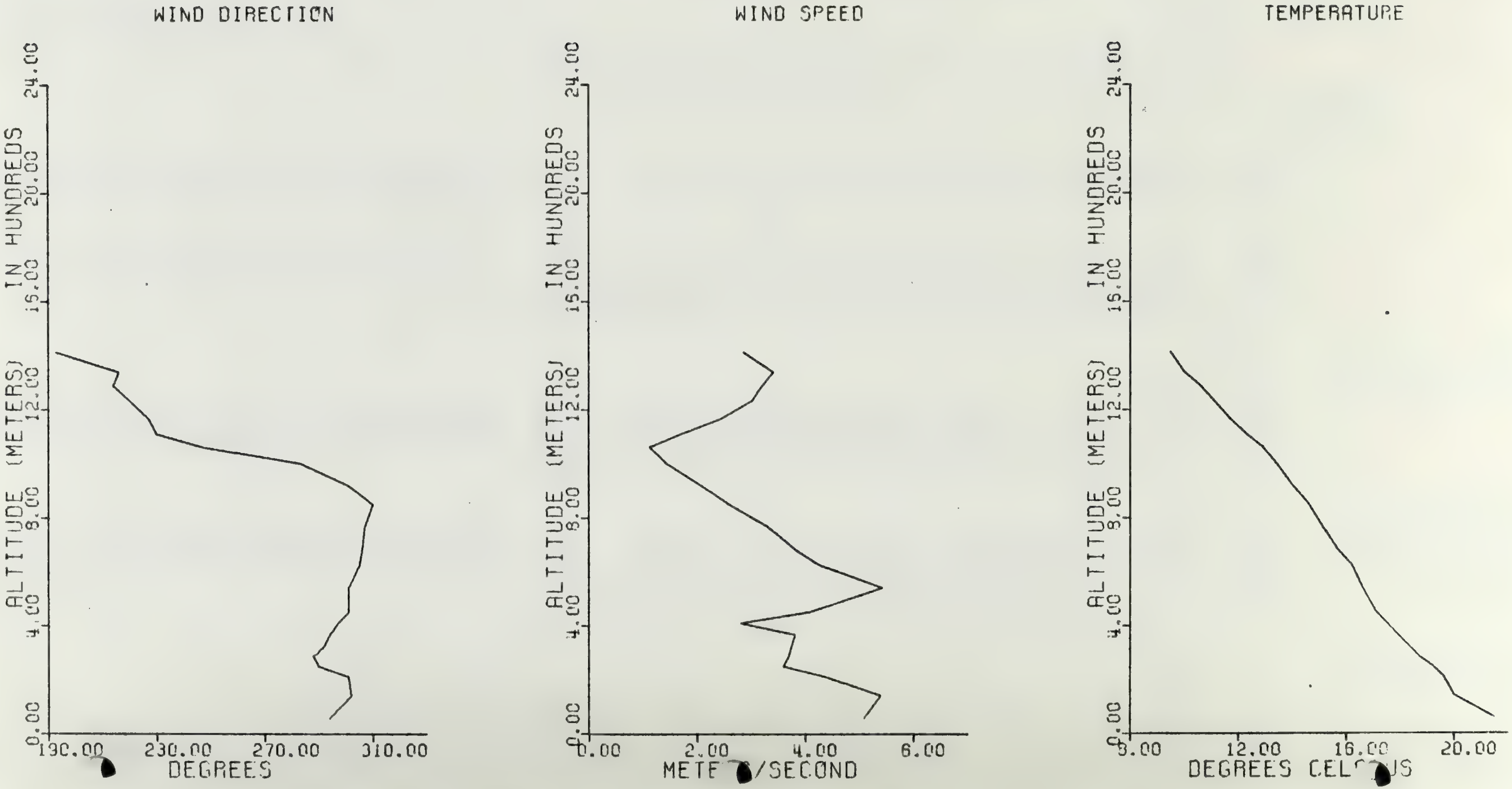
16	222.0	15.1
17	216.9	15.4
18	212.6	15.6
19	214.9	16.0
20	222.8	16.4
21	160.0	16.8
22	220.5	17.1
23	233.2	17.6
24	59.3	17.4

HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
194.	294.	16.7	21.5
463.	302.	17.7	20.0
696.	301.	14.3	19.6
820.	290.	11.8	19.2
936.	288.	12.1	18.7
1073.	292.	12.3	18.3
1206.	294.	12.5	17.9
1347.	297.	9.2	17.5
1479.	301.	13.4	17.1
1776.	301.	17.8	16.6
2051.	305.	14.0	16.2
2231.	306.	12.6	15.7
2526.	307.	10.8	15.1
2794.	310.	8.5	14.6
3023.	301.	6.8	14.0
3291.	283.	4.7	13.4
3487.	247.	3.7	12.9
3646.	230.	5.6	12.3
3826.	227.	8.0	11.7
4045.	220.	9.9	11.1
4225.	214.	10.5	10.6
4397.	216.	11.2	10.0
4635.	193.	9.4	9.5

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
59.	294.	5.1	21.5
141.	302.	5.4	20.0
212.	301.	4.4	19.6
250.	290.	3.6	19.2
285.	288.	3.7	18.7
327.	292.	3.7	18.3
368.	294.	3.8	17.9
410.	297.	2.8	17.5
451.	301.	4.1	17.1
541.	301.	5.4	16.6
625.	305.	4.3	16.2
680.	306.	3.8	15.7
770.	307.	3.3	15.1
851.	310.	2.6	14.6
921.	301.	2.1	14.0
1003.	283.	1.4	13.4
1063.	247.	1.1	12.9
1111.	230.	1.7	12.3
1166.	227.	2.4	11.7
1233.	220.	3.0	11.1
1288.	214.	3.2	10.6
1340.	216.	3.4	10.0
1413.	193.	2.9	9.5

C-B PIBAL SOUNDING

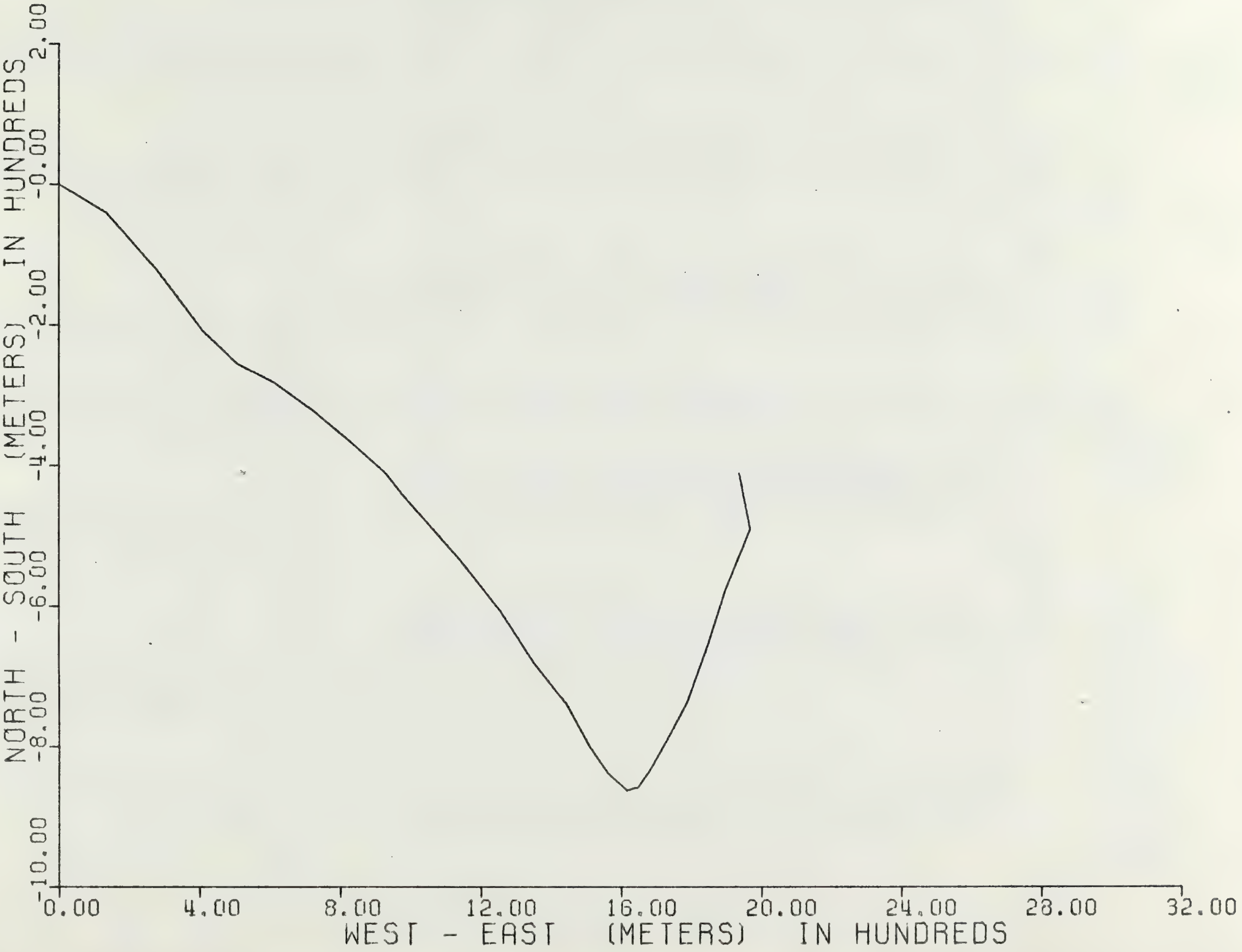
TIME 1330 DATE 6/2/78



C-B PIBAL SOUNDING

TIME 1330   DATE 6/2/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 5-78                                 ** SUSPECT DATA **

BALLOON RELEASED  645 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                     THEODOLITE #1              THEODOLITE #2

   TIME        AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0             0.0        0.0           59.5       -0.0          0.0
   0.5            84.9       60.2           72.1       20.1          2.0
   1.0            87.2       62.0           74.3       23.6          2.5
   1.5            87.7       69.3           77.6       24.8          2.5
   2.0           131.1       64.8           81.5       25.0          2.5
   2.5           148.7       56.6           82.5       25.9          2.5
   3.0           157.8       51.8           82.9       29.5          2.4
   3.5           161.0       49.0           82.4       33.4          2.3
   4.0           163.3       48.5           81.1       35.4          1.9
   4.5           165.5       48.5           79.7       37.3          1.5
   5.0           167.3       50.6           79.2       38.9          1.1
   5.5           172.7       53.2           79.4       40.7          0.7
   6.0           176.9       55.8           79.5       42.6          0.3
   6.5           180.3       59.6           79.9       45.1          0.0
   7.0           179.2       62.8           79.7       47.4         -0.4
   7.5           177.3       64.7           78.0       49.2         -0.8
   8.0           177.9       66.1           76.7       50.0         -1.1
   8.5           180.5       67.0           75.8       50.0         -1.5
   9.0           184.0       67.5           75.0       49.7         -1.9
   9.5           187.3       69.0           73.7       49.8         -2.2
  10.0           188.3       70.9           72.3       50.2         -2.6
  10.5           184.7       72.9           70.9       50.7         -3.0
  11.0           178.5       74.7           69.9       51.2         -3.3
  11.5           169.3       76.3           68.2       51.4         -3.7
  12.0           163.1       77.3           66.7       51.6         -4.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      846.6        9.2
     2     1005.1       10.0
     3     1481.4        9.1
     4      918.1        9.2
     5      293.6        9.0
     6      250.7        8.9
     7      755.6        9.0
     8      994.1        8.6
     9     1184.3        8.7
    10     1166.0        8.8
    11     1004.6        8.9
    12      876.4        9.2
    13      661.8        9.6
    14      612.7       10.3
    15      732.5       10.5
  16     742.0       10.9
  17     671.8       10.8
  18     591.3       10.6
  19     500.7       10.6
  20     458.9       10.8
  21     504.0       11.2
  22     558.8       11.8
  23     676.9       12.3
  24     770.4       12.7
```
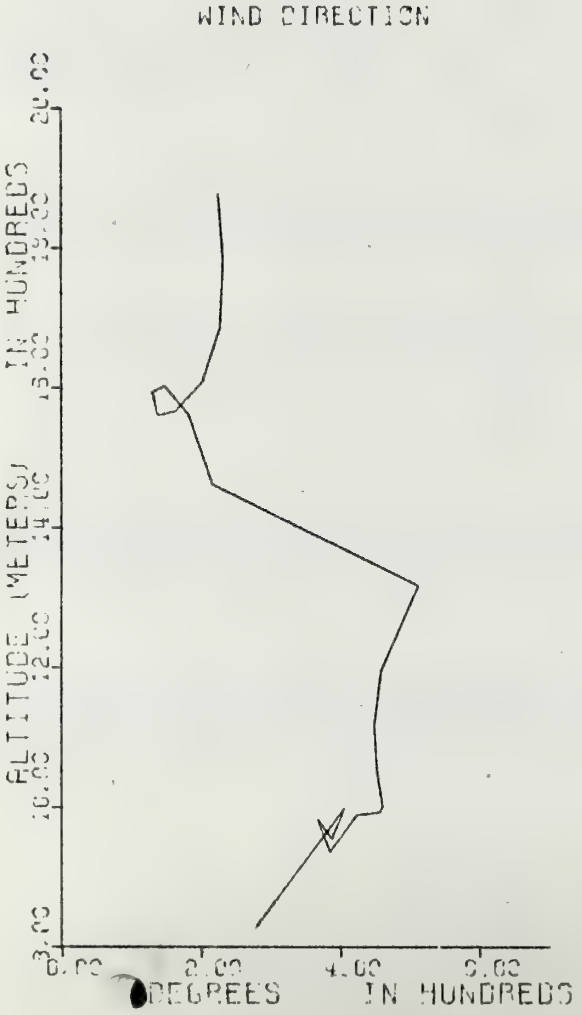
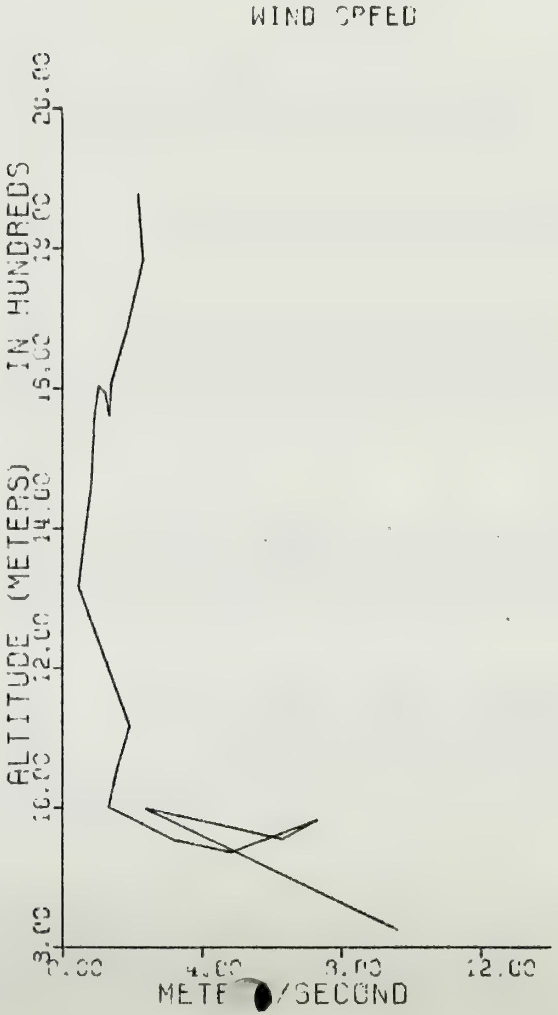

```
HEIGHT  DIRECTION  SPEED  TEMP
 FEET    DEGREES   FT/SEC DEG C

 2711.    277.      31.5   2.0
 3276.     46.       7.8   2.5
 3133.     28.      20.7   2.5
 3224.      8.      24.0   2.5
 3070.     25.      15.9   2.5
 3130.     38.      10.5   2.4
 3247.     64.       5.9   2.3
 3259.     97.       5.4   1.9
 3284.    101.       4.3   1.5
 3466.     92.       5.1   1.1
 3669.     89.       6.3   0.7
 3924.     99.       4.4   0.3
 4323.    153.       1.5   0.0
 4798.    216.       2.7  -0.4
 5122.    132.       3.0  -0.8
 5258.    147.       3.4  -1.1
 5229.    130.       4.0  -1.5
 5120.    138.       4.4  -1.9
 5138.    163.       4.4  -2.2
 5276.    202.       4.6  -2.6
 5533.    228.       6.1  -3.0
 5852.    232.       7.6  -3.3
 6156.    225.       7.1  -3.7
```

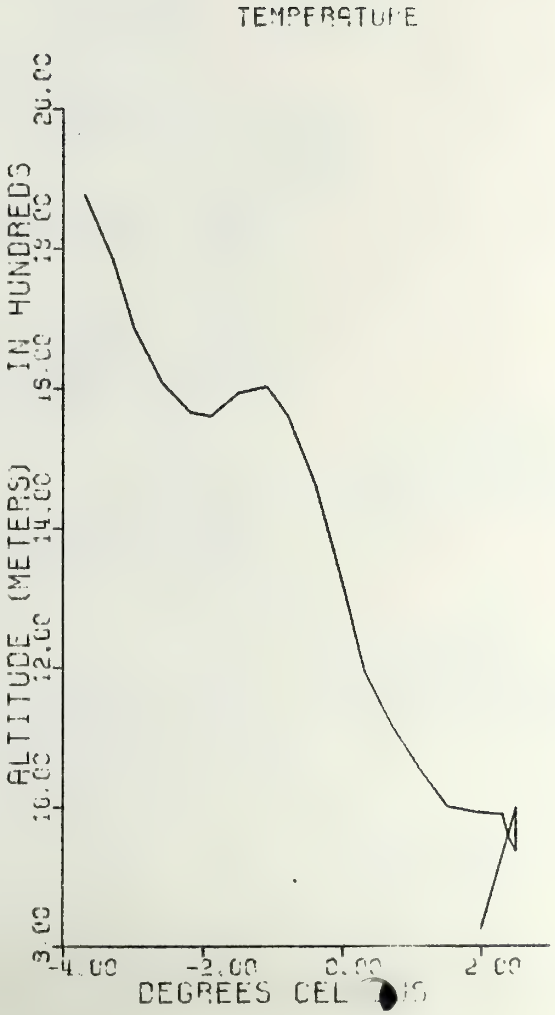
```
HEIGHT  DIRECTION  SPEED  TEMP
METERS   DEGREES   M/SEC  DEG C

  826.    277.       9.6   2.0
  999.     46.       2.4   2.5
  955.     28.       6.3   2.5
  983.      8.       7.3   2.5
  936.     25.       4.8   2.5
  954.     38.       3.2   2.4
  990.     64.       1.8   2.3
  993.     97.       1.6   1.9
 1001.    101.       1.3   1.5
 1056.     92.       1.6   1.1
 1118.     89.       1.9   0.7
 1196.     99.       1.3   0.3
 1318.    153.       0.5   0.0
 1462.    216.       0.8  -0.4
 1561.    132.       0.9  -0.8
 1603.    147.       1.0  -1.1
 1594.    130.       1.2  -1.5
 1561.    138.       1.3  -1.9
 1566.    163.       1.3  -2.2
 1608.    202.       1.4  -2.6
 1686.    228.       1.9  -3.0
 1784.    232.       2.3  -3.3
 1876.    225.       2.2  -3.7
```

C-3 PIBAL SOUNDING

TIME 645 DATE 6/5/78



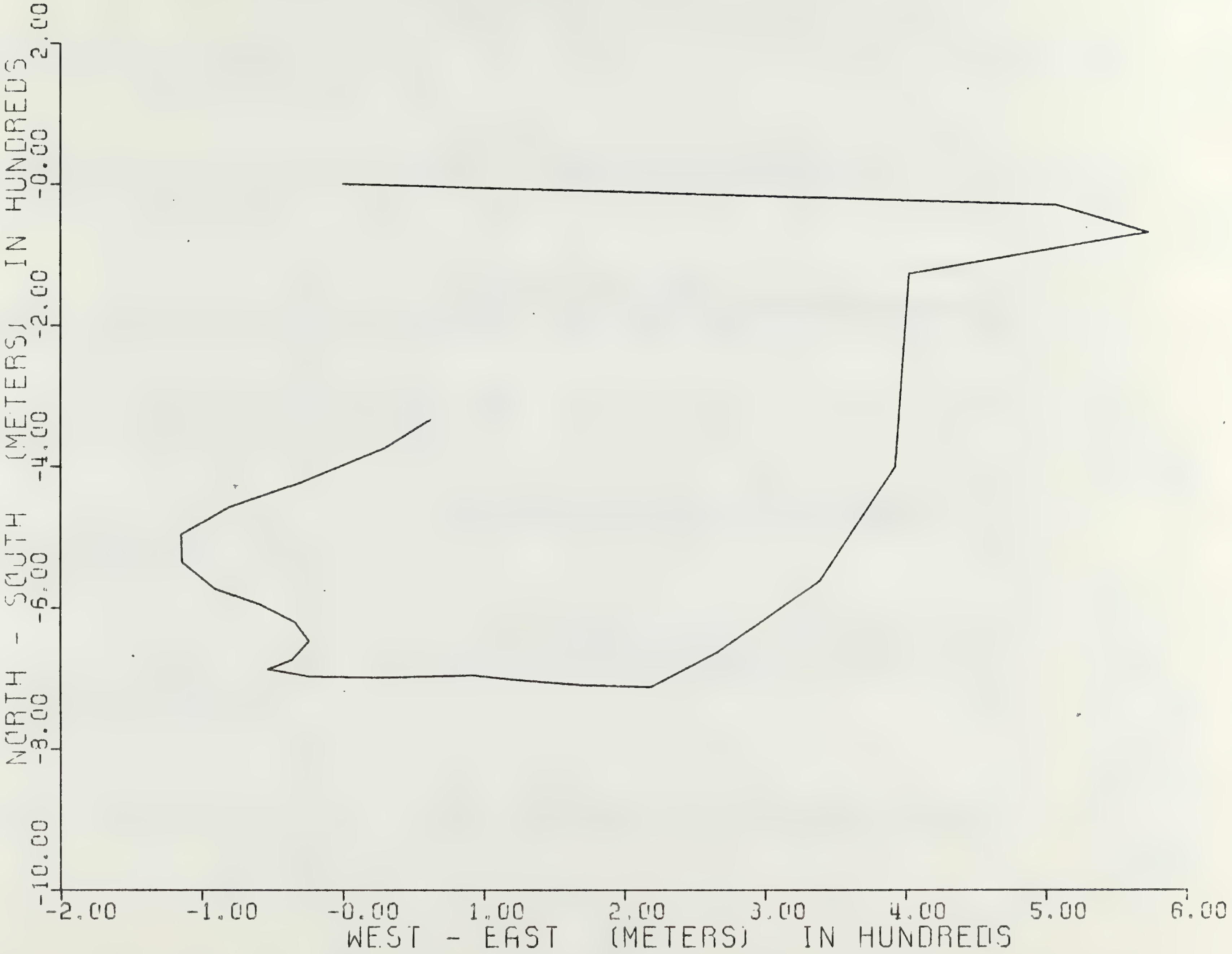




C-B PIBAL SOUNDING

TIME 645 DATE 6/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 5-78

BALLOON RELEASED 1400 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0            59.5       -0.0        0.0
   0.5          60.0       24.6            58.8        3.2       15.3
   1.0          61.7       24.0            59.3        5.2       15.1
   1.5          69.4       26.8            61.5        7.8       14.8
   2.0          75.0       28.2            64.0        9.9       14.6
   2.5          81.9       28.8            66.7       11.6       14.3
   3.0          84.6       30.1            68.9       13.4       13.9
   3.5          91.5       30.4            72.4       14.4       13.2
   4.0          96.2       28.6            75.9       14.9       12.6
   4.5          99.1       27.5            78.7       15.3       11.9
   5.0         101.4       26.4            81.1       15.7       11.3
   5.5         103.4       25.7            83.5       16.1       10.7
   6.0         105.2       24.8            85.5       16.3       10.0
   6.5         107.0       24.4            87.6       16.4        9.4
   7.0         109.2       23.8            90.0       16.6        8.7
   7.5         111.1       23.0            92.2       16.4        8.1
   8.0         112.8       21.8            94.2       16.5        7.4
   8.5         114.0       21.8            95.9       16.5        6.8
   9.0         115.1       21.7            97.5       16.8        6.4
   9.5         115.8       21.6            98.7       16.9        6.0
  10.0         116.2       21.9            99.6       17.5        5.6
  10.5         117.1       22.5           100.5       18.0        5.2
  11.0         117.4       23.0           101.3       18.7        4.8
  11.5         117.3       23.8           101.7       19.6        4.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       87.2        6.6
     2       88.5        7.8
     3      116.2        8.8
     4      106.2        9.8
     5      173.8       10.6
     6      137.9       11.7
     7      125.0       12.2
     8      133.8       13.3
     9      116.4       14.4
    10      143.9       15.5
    11      140.5       16.7
    12      176.5       17.7
    13      132.1       18.6
    14      137.2       19.7
    15      107.7       20.7
    16      240.8       21.9
```

```
17      149.8       22.9
18      157.1       24.1
19      132.7       25.2
20      169.4       26.3
21      134.2       26.7
22      156.6       27.9
23      179.9       29.1
```

```
   HEIGHT  DIRECTION   SPEED  TEMP
    FEET    DEGREES   FT/SEC DEG C

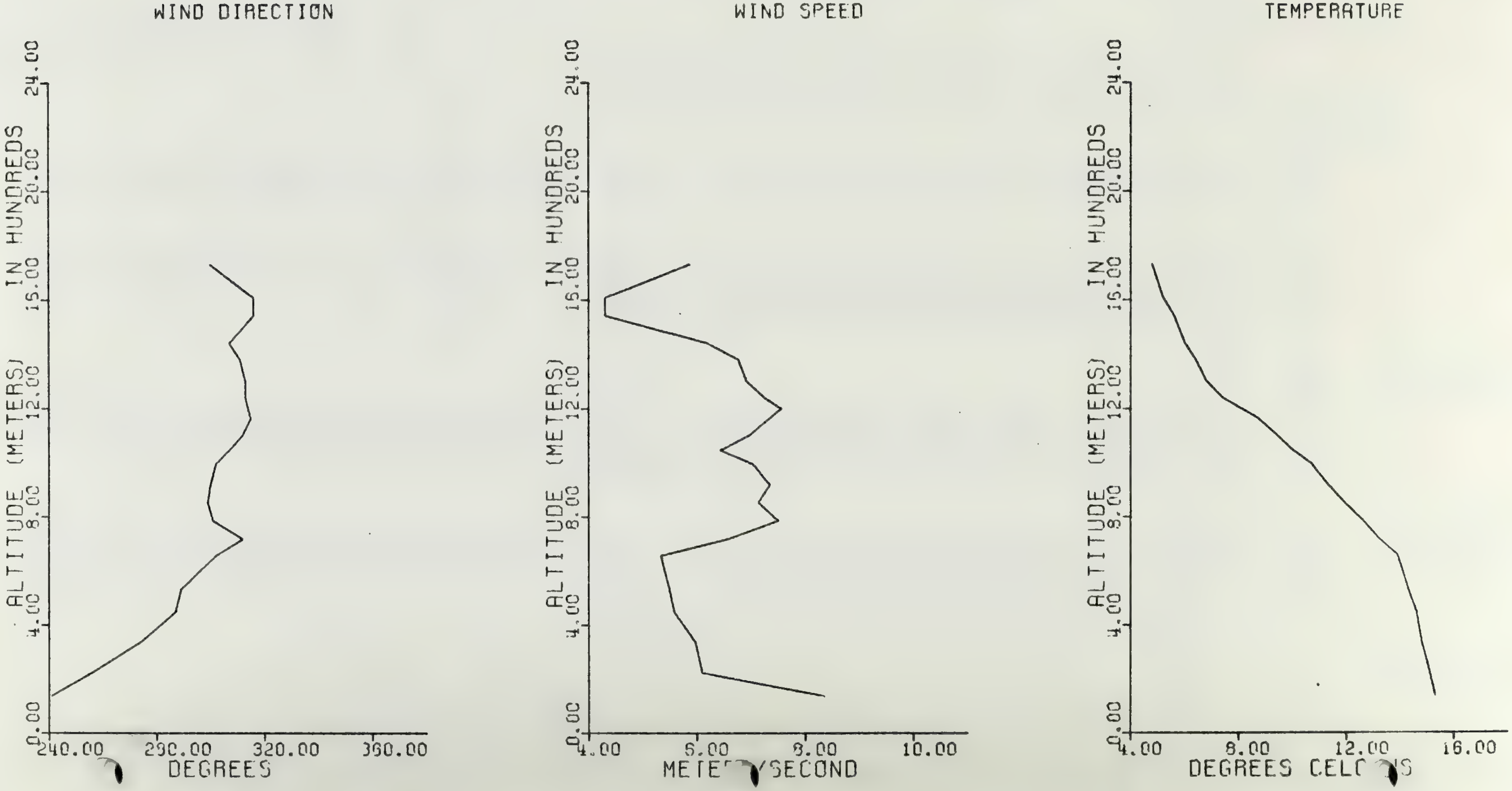
     455.     241.      27.4  15.3
     735.     256.      20.0  15.1
    1106.     274.      19.6  14.8
    1474.     287.      18.3  14.6
    1746.     289.      18.0  14.3
    2156.     302.      17.5  13.9
    2360.     312.      21.6  13.2
    2576.     301.      24.6  12.6
    2801.     299.      23.4  11.9
    3014.     300.      24.1  11.3
    3267.     302.      23.1  10.7
    3434.     307.      21.1  10.0
    3618.     312.      22.9   9.4
    3821.     315.      24.1   8.7
    3938.     314.      24.8   8.1
    4068.     313.      23.8   7.4
    4270.     313.      22.7   6.8
    4527.     311.      22.2   6.4
    4729.     307.      20.3   6.0
    5062.     316.      14.1   5.6
    5279.     316.      14.1   5.2
    5676.     300.      19.2   4.8
```

```
   HEIGHT  DIRECTION   SPEED  TEMP
   METERS   DEGREES   M/SEC  DEG C

     139.     241.       8.4  15.3
     224.     256.       6.1  15.1
     337.     274.       6.0  14.8
     449.     287.       5.6  14.6
     532.     289.       5.5  14.3
     657.     302.       5.3  13.9
     719.     312.       6.6  13.2
     785.     301.       7.5  12.6
     854.     299.       7.1  11.9
     919.     300.       7.3  11.3
     996.     302.       7.0  10.7
    1047.     307.       6.4  10.0
    1103.     312.       7.0   9.4
    1165.     315.       7.3   8.7
    1200.     314.       7.6   8.1
    1240.     313.       7.3   7.4
    1302.     313.       6.9   6.8
    1380.     311.       6.8   6.4
    1441.     307.       6.2   6.0
    1543.     316.       4.3   5.6
    1609.     316.       4.3   5.2
    1730.     300.       5.9   4.8
```

C-B PIBAL SOUNDING

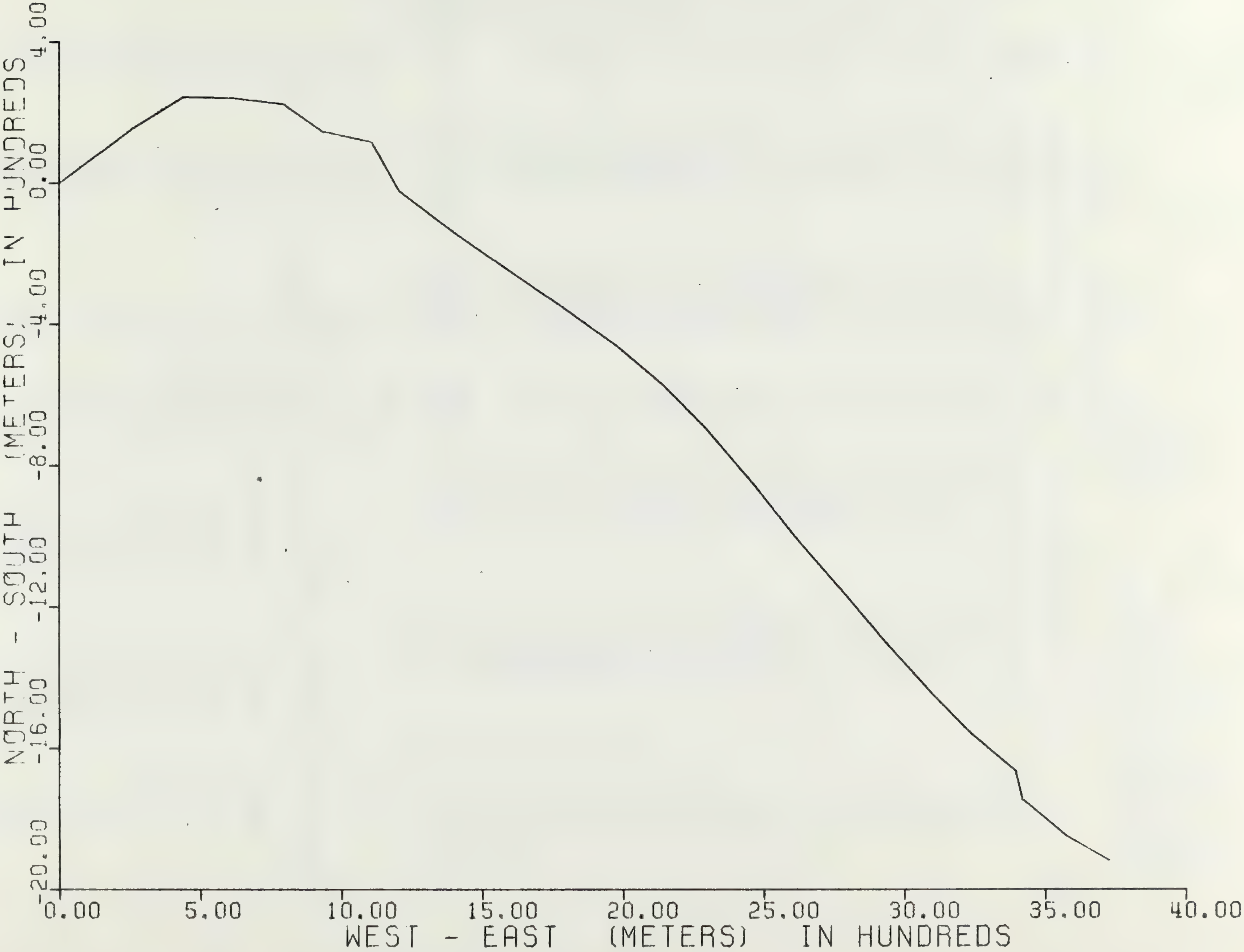
TIME 1400 DATE 6/5/78



C-B PIBAL SOUNDING

TIME 1400 DATE 6/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6- 7-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                  THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0             59.5       -0.0       0.0
   0.5          302.2       62.3             58.0        2.4      10.7
   1.0          318.3       69.8             57.2        5.2      11.1
   1.5           86.3       82.8             59.4        8.2      11.6
   2.0          132.1       66.1             63.9       11.3      12.0
   2.5          142.6       50.3             71.0       14.1      11.6
   3.0          145.3       43.7             76.4       16.2      11.2
   3.5          147.3       39.3             82.1       18.4      10.8
   4.0          148.5       38.5             86.2       20.2      10.4
   4.5          149.6       37.8             90.0       22.2      10.0
   5.0          150.4       38.0             93.2       23.8       9.6
   5.5          151.4       37.7             96.9       25.5       9.2
   6.0          154.1       36.2            102.1       26.9       8.8
   6.5          156.5       34.9            107.6       27.9       8.4
   7.0          157.1       34.0            111.7       28.6       8.0
   7.5          157.4       32.7            115.6       28.9       7.6
   8.0          157.5       31.9            118.6       29.0       7.2
   8.5          156.9       31.5            120.9       28.8       6.7
   9.0          156.1       30.7            122.7       28.7       6.0
   9.5          155.3       30.4            124.2       28.2       5.4
  10.0          154.3       29.7            125.3       27.9       4.8
  10.5          153.3       29.1            126.5       27.5       4.1
  11.0          152.6       28.7            127.2       27.0       3.5
  11.5          151.5       28.1            127.8       26.6       2.9
  12.0          150.5       27.8            128.0       26.4       2.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      10.2        5.0
     2       3.0        5.3
     3      60.6        5.7
     4      79.1        6.1
     5      97.2        6.8
     6     122.4        7.4
     7     160.0        8.2
     8     128.5        8.9
     9     150.6        9.6
    10     117.0       10.2
    11     117.5       11.0
    12     137.7       11.8
    13     118.8       12.8
    14     129.6       13.9
    15     178.8       15.1
```

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16     192.7       16.2
17     141.1       17.5
18     202.9       18.7
19     113.5       20.0
20     158.1       21.3
21     161.6       22.9
22     112.5       24.1
23     139.9       25.6
24     160.9       26.9


      HEIGHT   DIRECTION   SPEED   TEMP
       FEET     DEGREES    FT/SEC  DEG C

        320.     139.        3.6   10.7
        591.     287.        4.3   11.1
        893.     314.       12.2   11.6
       1194.     328.       19.1   12.0
       1482.     331.       21.0   11.6
       1724.     333.       19.6   11.2
       2005.     334.       17.7   10.8
       2290.     336.       14.8   10.4
       2593.     337.       13.8   10.0
       2890.     339.       14.1    9.6
       3221.     347.       18.5    9.2
       3514.     353.       22.8    8.8
       3825.     348.       23.0    8.4
       4153.     342.       23.4    8.0
       4458.     340.       23.3    7.6
       4742.     335.       22.3    7.2
       5060.     329.       23.3    6.7
       5355.     326.       23.5    6.0
       5647.     324.       24.0    5.4
       5925.     322.       27.1    4.8
       6270.     322.       25.4    4.1
       6482.     319.       25.2    3.5
       6789.     315.       26.1    2.9

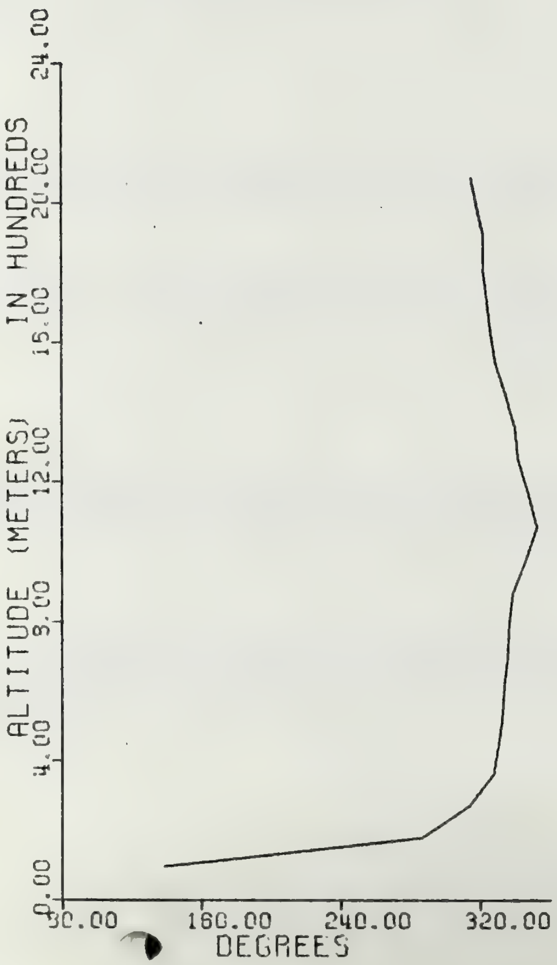

      HEIGHT   DIRECTION   SPEED   TEMP
      METERS    DEGREES    M/SEC   DEG C

         98.     139.        1.1   10.7
        180.     287.        1.3   11.1
        272.     314.        3.7   11.6
        364.     328.        5.8   12.0
        452.     331.        6.4   11.6
        525.     333.        6.0   11.2
        611.     334.        5.4   10.8
        698.     336.        4.5   10.4
        790.     337.        4.2   10.0
        881.     339.        4.3    9.6
        982.     347.        5.6    9.2
       1071.     353.        6.9    8.8
       1166.     348.        7.0    8.4
       1266.     342.        7.1    8.0
       1359.     340.        7.1    7.6
       1445.     335.        6.8    7.2
       1542.     329.        7.1    6.7
       1632.     326.        7.2    6.0
       1721.     324.        7.3    5.4
       1806.     322.        8.3    4.8
       1911.     322.        7.7    4.1
       1976.     319.        7.7    3.5
```

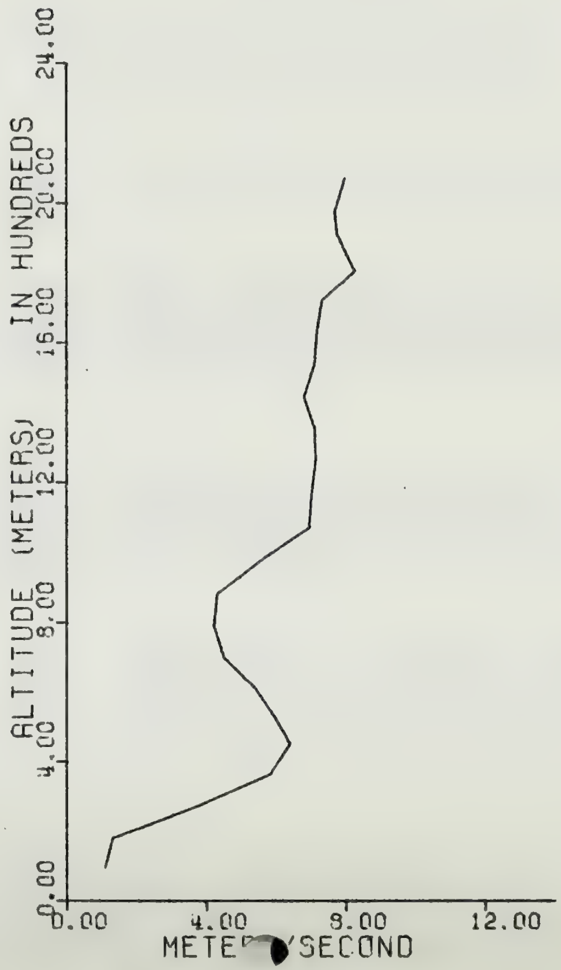
C-B PIBAL SOUNDING

TIME 645   DATE 6/7/78

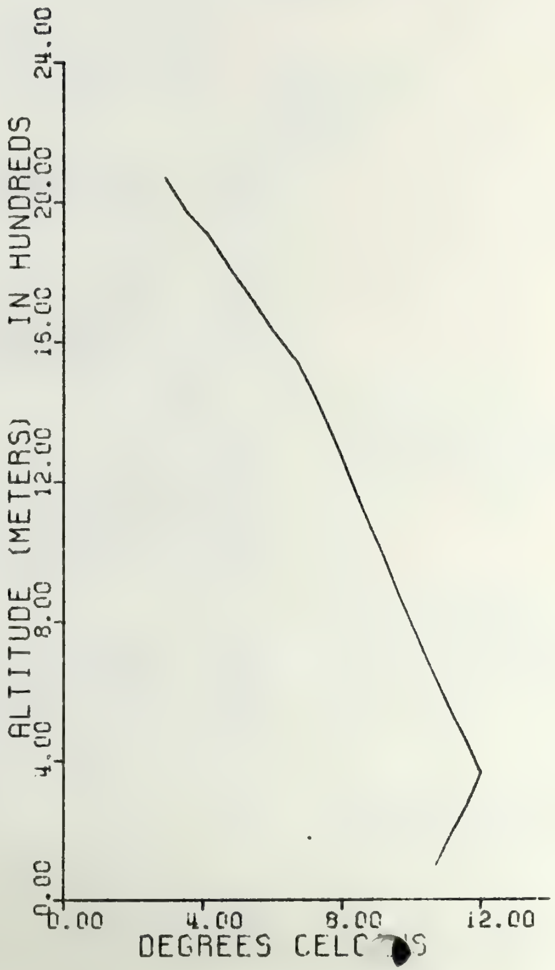
WIND DIRECTION



WIND SPEED



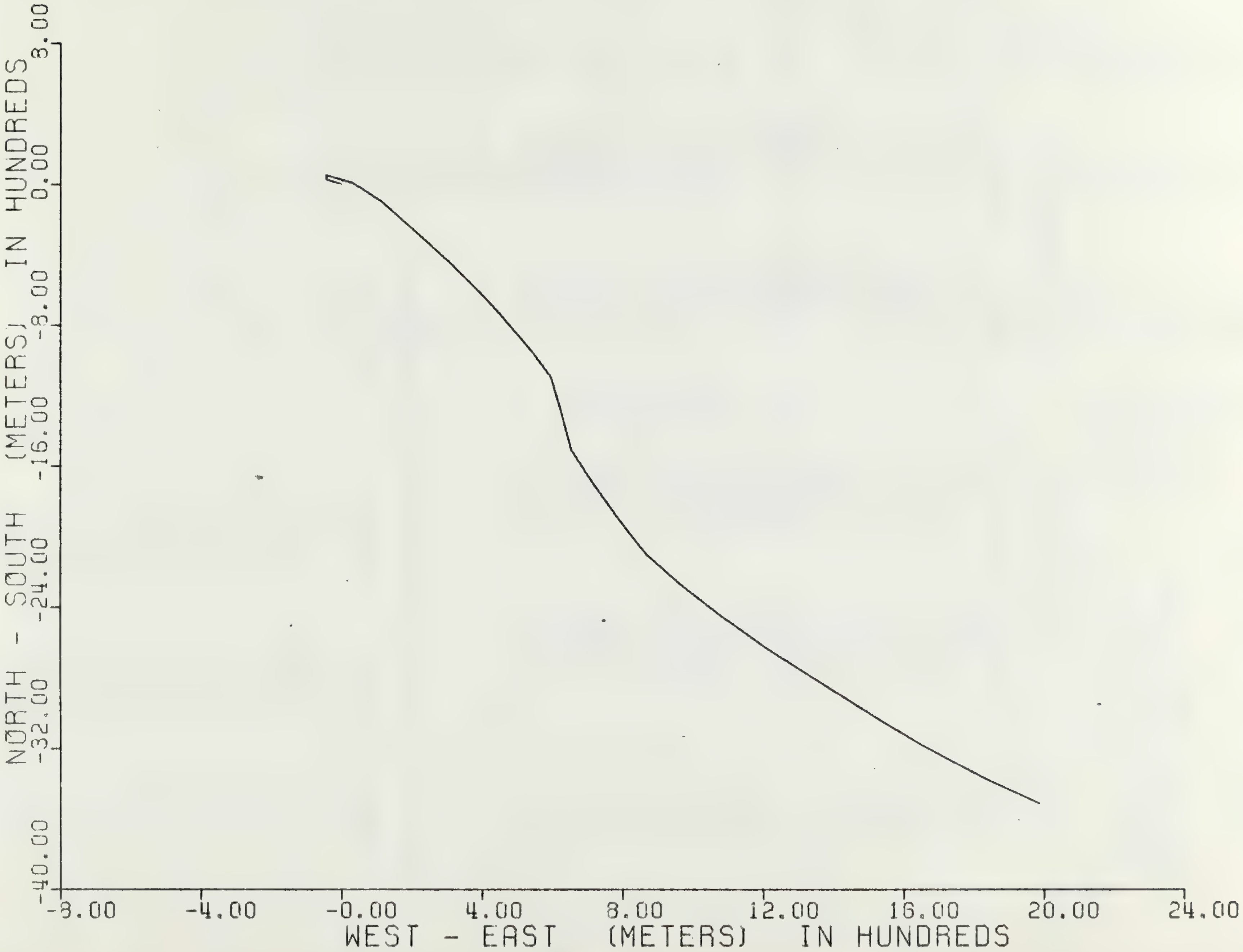
TEMPERATURE



C-B PIBAL SOUNDING

TIME 645 DATE 6/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



```
C-B PIBAL SOUNDING

SOUNDING DATE  6- 7-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0            0.0        0.0           59.5       -0.0        0.0
   0.5          152.2       44.2           61.8        2.9       21.1
   1.0          138.4       47.9           65.7        7.4       20.1
   1.5          134.0       50.6           69.7       13.3       19.2
   2.0          134.5       50.7           73.2       17.4       17.5
   2.5          135.0       50.5           77.0       21.3       15.8
   3.0          134.0       52.7           80.0       25.0       14.0
   3.5          130.3       53.0           82.4       29.3       11.9
   4.0          127.0       52.8           84.4       31.5        9.8
   4.5          123.1       51.9           86.4       32.7
   5.0          119.6       49.0           87.9       32.9
   5.5          116.2       47.6           88.2       33.0
   6.0          112.2       46.4           87.7       32.4
   6.5          109.4       44.8           87.4       32.2
   7.0          107.1       43.7           87.4       31.8
   7.5          104.6       41.9           87.1       31.1
   8.0          102.3       40.6           86.5       30.3
   8.5           99.8       38.8           86.0       29.6
   9.0           98.1       37.6           85.6       29.1
   9.5           97.9       36.4           85.2       28.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

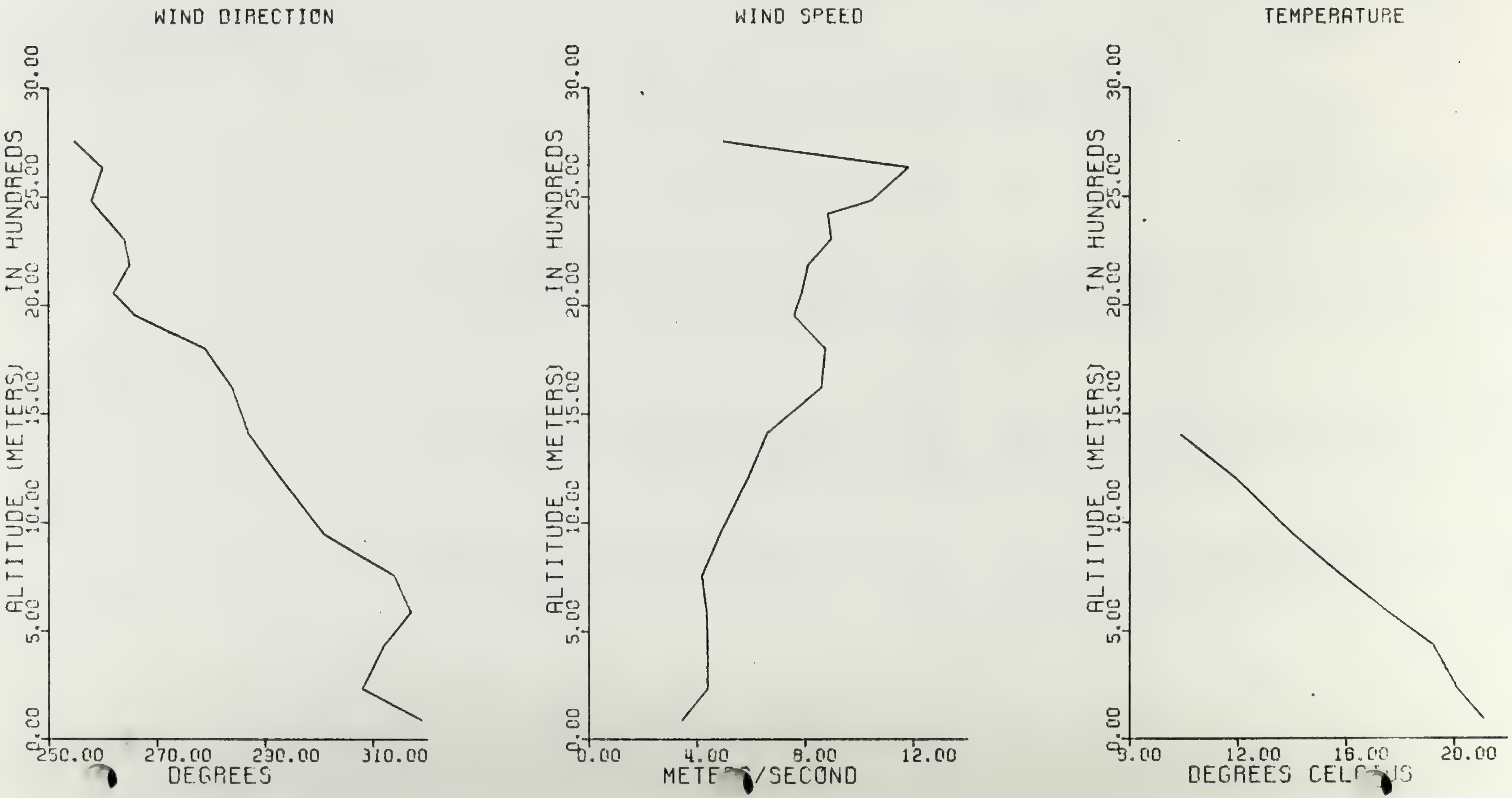
     1      116.6        5.1
     2       96.3        5.8
     3      107.9        6.8
     4      113.4        7.6
     5      113.2        8.6
     6       18.0        9.6
     7      115.9       11.2
     8      110.5       12.7
     9       47.1       14.4
    10      146.2       16.2
    11      181.0       17.7
    12      129.3       19.0
    13      215.4       20.5
    14      168.8       22.0
    15      195.3       23.7
    16      162.6       24.9
    17      190.3       27.2
    18      201.0       29.0
    19      311.2       28.6
```

HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
297.	319.	11.3	21.1
772.	308.	14.4	20.1
1426.	312.	14.4	19.2
1930.	317.	14.3	17.5
2477.	314.	13.7	15.8
3109.	301.	15.9	14.0
3957.	293.	19.3	11.9
4631.	287.	21.6	9.8
5324.	284.	28.2	
5909.	279.	28.7	
6414.	266.	24.9	
6754.	262.	25.8	
7176.	265.	26.6	
7571.	264.	29.4	
7949.	260.	29.0	
8149.	258.	34.3	
8649.	260.	38.8	
9034.	255.	16.4	

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
90.	319.	3.4	21.1
235.	308.	4.4	20.1
435.	312.	4.4	19.2
588.	317.	4.4	17.5
755.	314.	4.2	15.8
948.	301.	4.8	14.0
1206.	293.	5.9	11.9
1412.	287.	6.6	9.8
1623.	284.	8.6	
1801.	279.	8.7	
1955.	266.	7.6	
2059.	262.	7.9	
2187.	265.	8.1	
2308.	264.	9.0	
2423.	260.	8.8	
2484.	258.	10.5	
2636.	260.	11.8	
2754.	255.	5.0	

C-B PIBAL SOUNDING

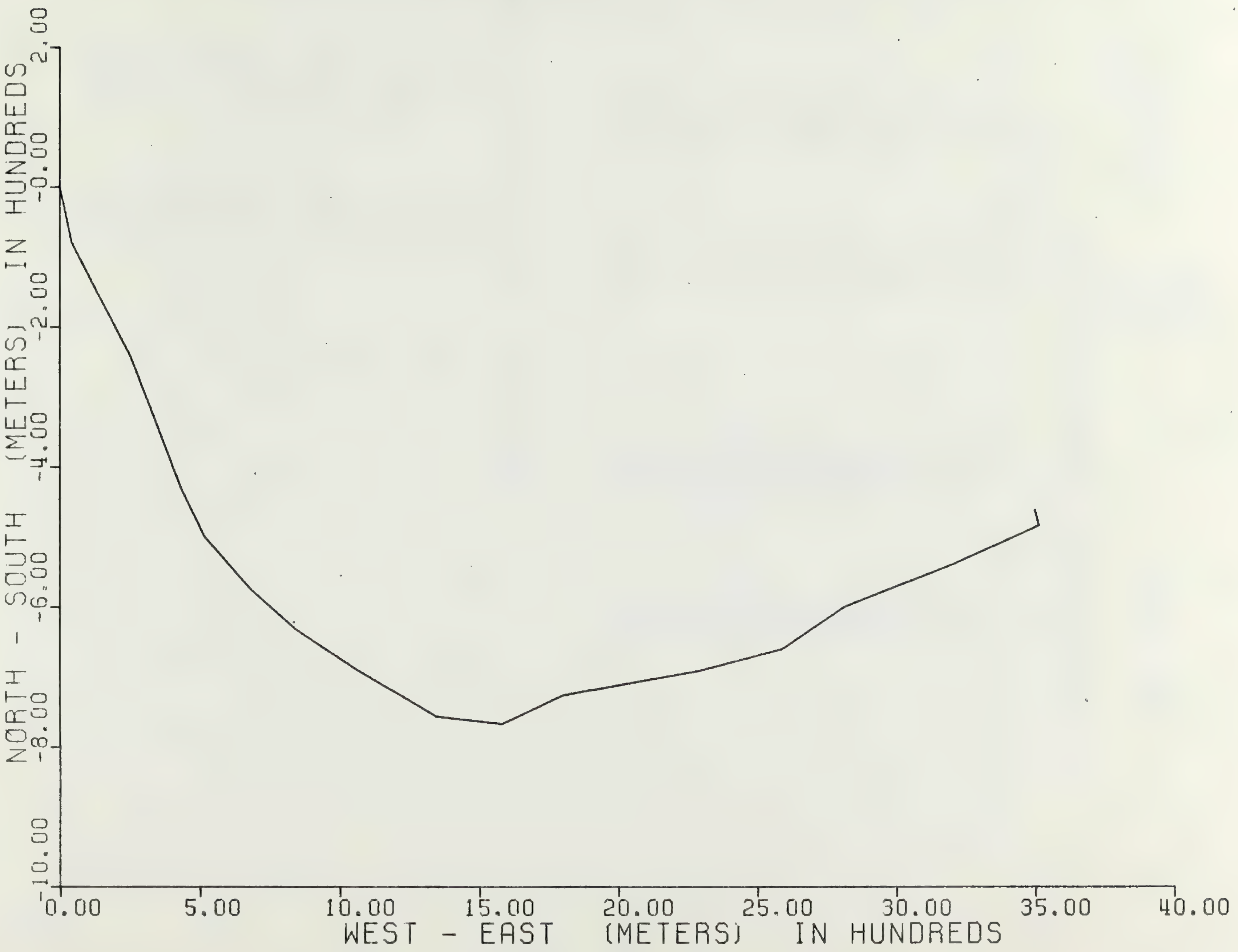
TIME 1330   DATE 6/7/78



C-B PIBAL SOUNDING

TIME 1330 DATE 6/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



C-b PIBAL SOUNDING

Time: 0645　　　　Date: 6/9/78

DATA NOT REDUCED. INSUFFICIENT DATA POINTS.

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C-B PIBAL SOUNDING

SOUNDING DATE  6- 9-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0          59.5       -0.0
   0.5           0.1       19.7          50.0        3.7
   1.0           7.5       18.3          44.4        5.9
   1.5          11.2       16.1          41.2        6.6
   2.0          19.0       14.2          38.8        7.2
   2.5          20.2       15.8          38.5        8.1
   3.0          23.6       15.6          38.8        9.1
   3.5          27.3       15.4          39.7        9.5
   4.0          31.2       14.4          40.7        9.3
   4.5          33.7       14.8          41.9        9.5
   5.0          35.6       13.5          42.4        9.5
   5.5          37.3       13.4          42.9        9.8
   6.0          38.2       13.8          43.1       10.5
   6.5          39.4       14.4          43.5       10.9
   7.0          39.9       14.8          43.6       11.6
   7.5          40.2       15.0          43.7       11.9


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        69.8         6.5
     2        52.8         8.5
     3        50.2        10.3
     4        17.1        14.2
     5        84.9        15.1
     6         1.1        17.4
     7         3.8        19.6
     8        58.3        23.0
     9       137.3        24.1
    10        23.6        28.3
    11        45.4        32.4
    12        23.0        36.3
    13       182.5        39.0
    14       142.9        43.3
    15       139.4        45.3


         HEIGHT  DIRECTION   SPEED  TEMP
          FEET    DEGREES   FT/SEC DEG C

           443.     187.      39.7
           802.     197.      37.9
          1008.     207.      55.7
          1423.     211.      45.7
   1692.    218.        29.2
   2044.    224.        43.8
   2354.    227.        55.2
   2655.    234.        44.0
   2850.    230.        51.4
   3202.    225.        78.9
   3707.    225.        74.4
   4359.    227.        61.0
   4877.    227.        63.7
   5648.    224.        57.3


  HEIGHT  DIRECTION   SPEED   TEMP
  METERS   DEGREES    M/SEC   DEG C

    135.    187.        12.1
    245.    197.        11.6
    307.    207.        17.0
    434.    211.        13.9
    516.    213.         8.9
    623.    224.        13.4
    718.    227.        16.8
    809.    234.        13.4
    869.    230.        15.7
    976.    225.        24.0
   1130.    225.        22.7
   1329.    227.        18.6
   1486.    227.        19.4
   1722.    224.        17.5
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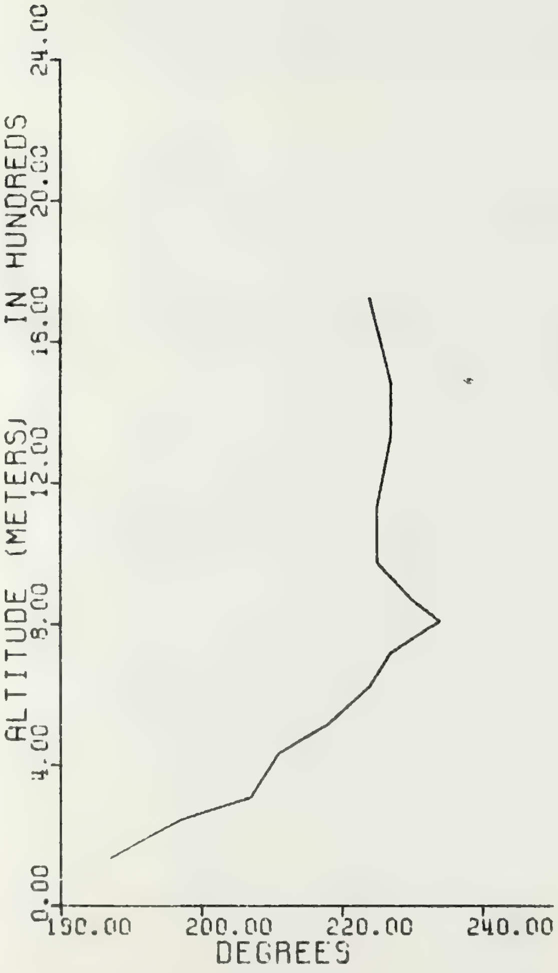
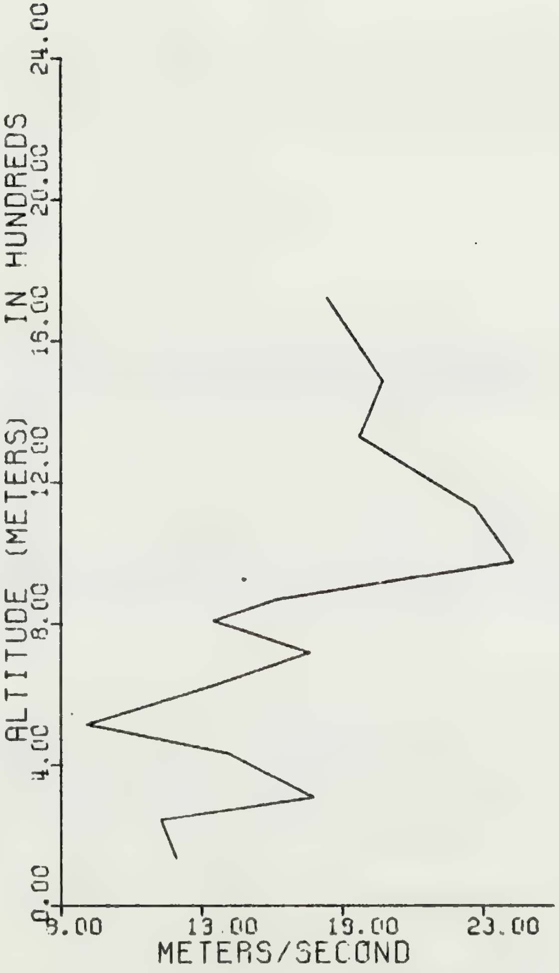
C-B PIBAL SOUNDING

TIME 1330   DATE 6/9/78

WIND DIRECTION



WIND SPEED

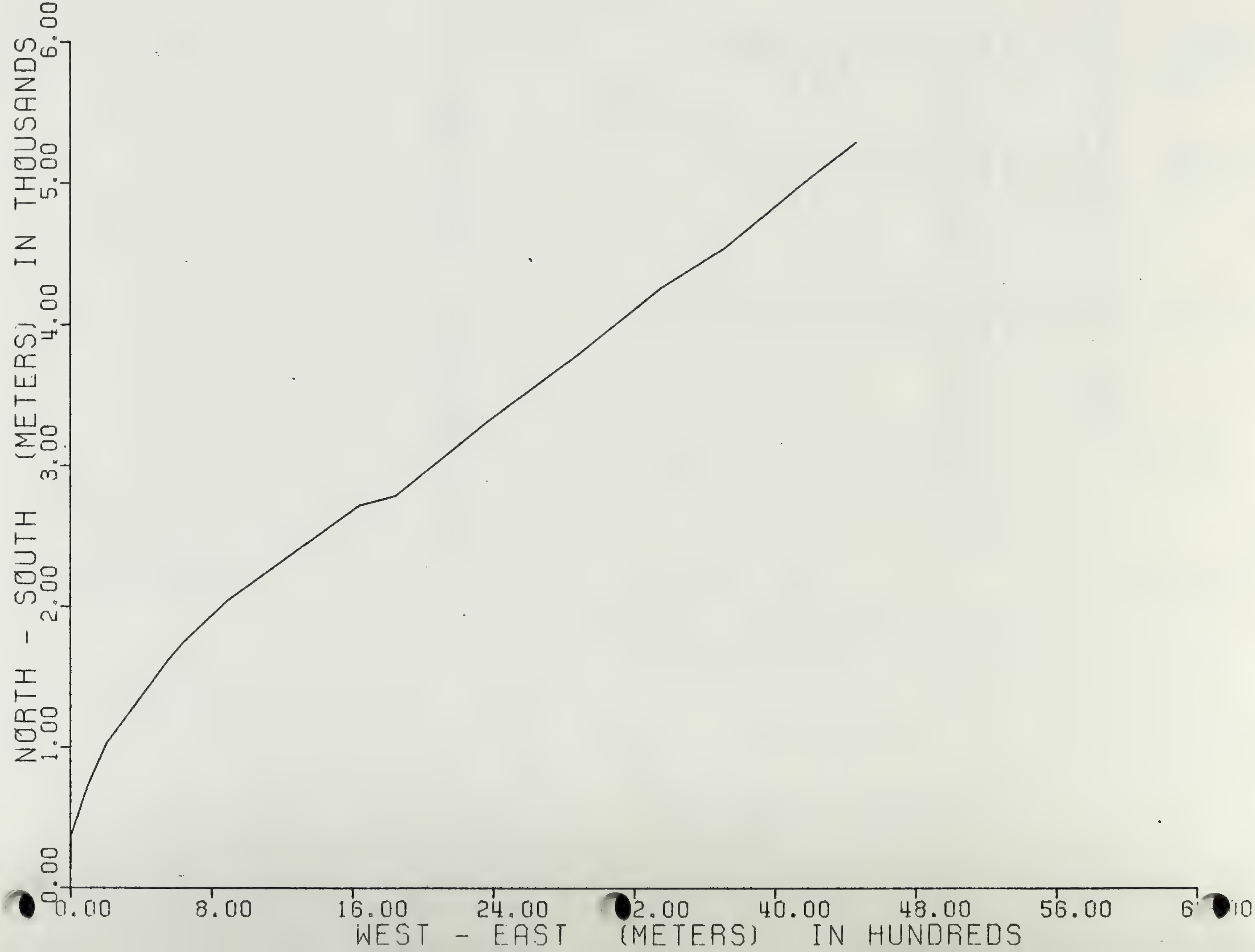


TEMPERATURE

C-B PIBAL SOUNDING

TIME 1330   DATE 6/9/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-12-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1                THEODOLITE #2

   TIME       AZIMUTH  ELEVATION           AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0              59.5       -0.0        0.0
   0.5          296.1       42.5              56.1        2.9       12.2
   1.0          299.0       57.1              55.7        6.5       12.8
   1.5          305.5       65.2              54.7        9.8       13.4
   2.0          319.4       65.1              53.3       12.3       14.0
   2.5          325.5       57.3              49.3       15.3       16.5
   3.0          333.2       48.2              43.6       17.1       16.1
   3.5          341.1       42.8              38.2       18.4       15.7
   4.0          345.4       37.6              30.6       19.6       15.3
   4.5          349.4       34.6              28.3       20.0       15.0
   5.0          353.2       32.4              28.9       20.3       14.6
   5.5          357.9       31.8              29.8       20.5       14.2
   6.0            2.6       31.5              30.8       20.7       13.6
   6.5            6.6       31.2              32.6       20.9       12.8
   7.0           10.4       31.0              34.4       20.9       12.1
   7.5           15.4       31.0              35.7       20.8       11.3
   8.0           19.1       30.5              36.8       20.7       10.5
   8.5           23.1       29.7              37.7       20.7        9.7
   9.0           25.4       29.0              38.9       20.4        8.9
   9.5           27.9       28.6              40.0       20.1        8.2
  10.0           30.7       27.6              40.9       19.8        7.4
  10.5           33.1       26.7              42.0       19.5        6.6
  11.0           34.7       26.0              42.8       19.2        5.9
  11.5           36.6       25.3              43.8       18.9        5.2
  12.0           38.0       24.6              43.8       18.1        4.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1       16.6         5.0
     2       36.1         5.3
     3       13.2         5.6
     4        0.9         6.0
     5       45.3         6.5
     6       68.9         7.4
     7       23.3         8.6
     8       98.7        10.8
     9       24.6        12.3
    10      203.0        13.1
    11      266.4        14.0
    12      291.1        15.1
    13      390.0        15.6
    14      444.9        16.1
    15      345.2        17.5
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      16      316.5       18.8
      17      273.5       21.1
      18      306.3       21.7
      19      253.5       22.6
      20      213.9       24.8
      21      219.2       26.5
      22      223.5       27.7
      23      220.4       29.1
      24       71.4       31.0

           HEIGHT  DIRECTION   SPEED   TEMP
            FEET    DEGREES   FT/SEC  DEG C

             354.     119.       7.2   12.2
             679.     161.       1.8   12.8
            1012.     180.       4.0   13.4
            1267.     162.       9.6   14.0
            1571.     161.      17.6   16.5
            1837.     172.      23.8   16.1
            2196.     175.      34.8   15.7
            2757.     179.      35.9   15.3
            3066.     195.      22.6   15.0
            3174.     216.      18.3   14.6
            3388.     222.      20.9   14.2
            3656.     234.      18.4   13.6
            3780.     253.      15.1   12.8
            3871.     241.      21.5   12.1
            4229.     233.      27.6   11.3
            4508.     229.      34.6   10.5
            5018.     233.      29.1    9.7
            5072.     249.      18.0    8.9
            5211.     236.      30.6    8.2
            5594.     234.      38.3    7.4
            5855.     239.      29.5    6.6
            5998.     242.      27.2    5.9
            6190.     236.      32.8    5.2

           HEIGHT  DIRECTION   SPEED   TEMP
           METERS   DEGREES    M/SEC   DEG C

             108.     119.       2.2   12.2
             207.     161.       0.5   12.8
             308.     180.       1.2   13.4
             386.     162.       2.9   14.0
             479.     161.       5.4   16.5
             560.     172.       7.3   16.1
             669.     175.      10.6   15.7
             840.     179.      10.9   15.3
             935.     195.       6.9   15.0
             967.     216.       5.6   14.6
            1033.     222.       6.4   14.2
            1114.     234.       5.6   13.6
            1152.     253.       4.6   12.8
            1180.     241.       6.6   12.1
            1289.     233.       8.4   11.3
            1374.     229.      10.5   10.5
            1530.     233.       8.9    9.7
            1546.     249.       5.5    8.9
            1588.     236.       9.3    8.2
            1705.     234.      11.7    7.4
            1785.     239.       9.0    6.6
            1828.     242.       8.3    5.9
            1887.     236.      10.0    5.2
```
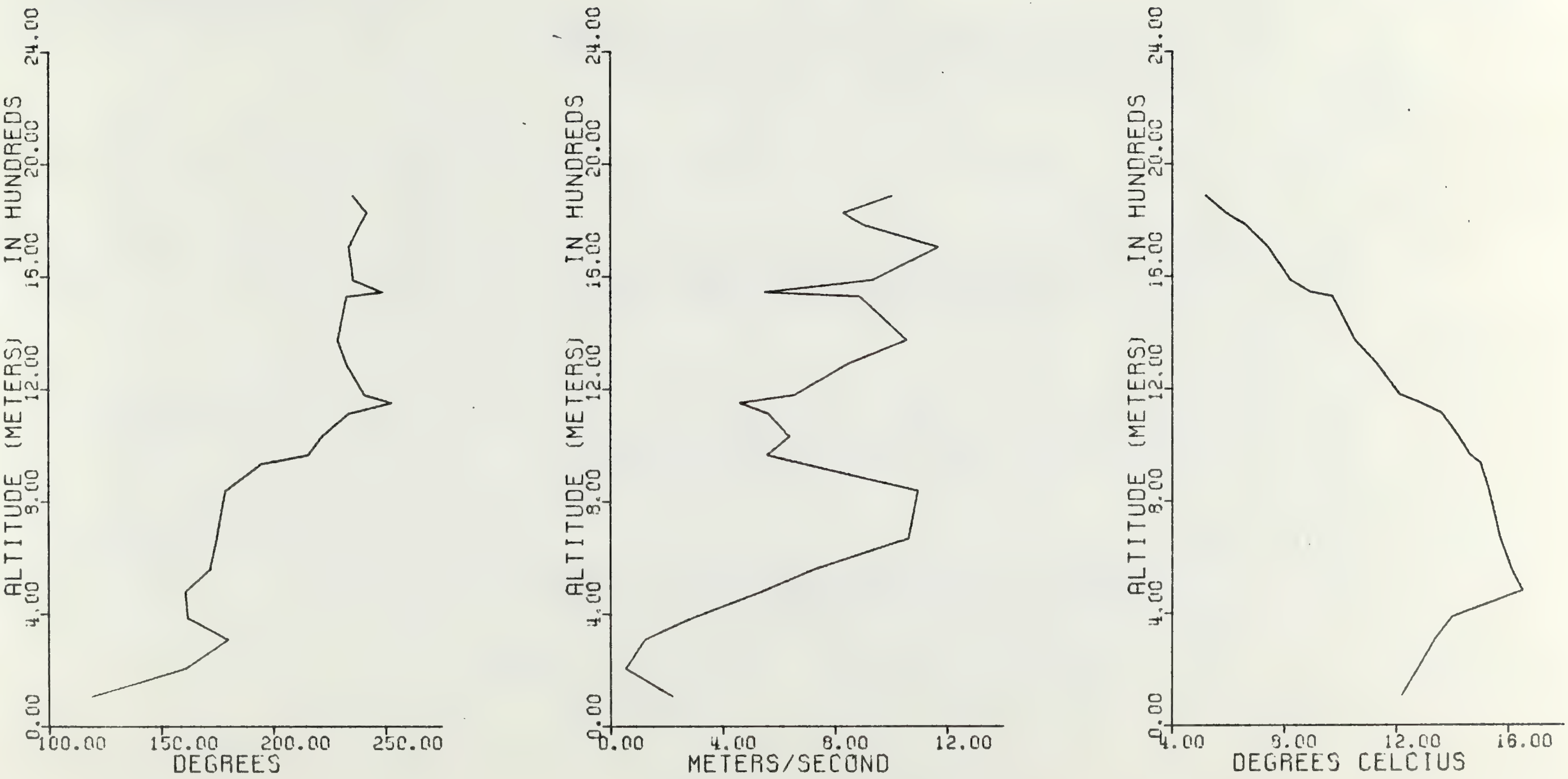

C-B PIBAL SOUNDING

TIME 645   DATE 6/12/78



WIND DIRECTION

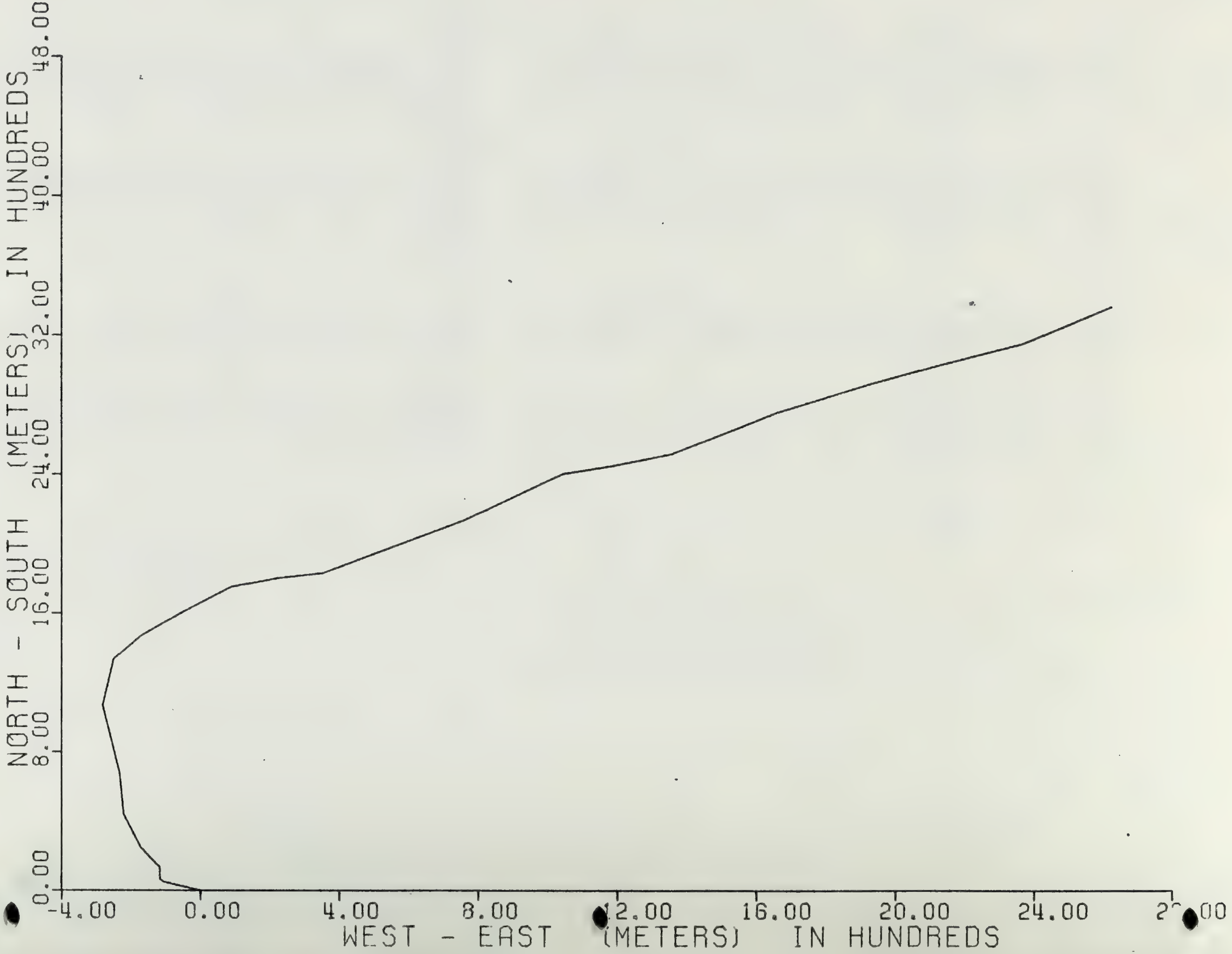
WIND SPEED

TEMPERATURE

C-B PIBAL SOUNDING

TIME 645 DATE 6/12/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-12-78

BALLOON RELEASED 1300 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                 THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           59.5       -0.0          0.0
   0.5          20.0        9.6           54.6        1.2         29.5
   1.0          21.0        8.6           50.2        2.2         29.0
   1.5          21.9        8.2           46.6        2.9         28.6
   2.0          22.5        8.6           44.1        3.8         28.1
   2.5          21.3        8.9           41.0        4.5         27.6
   3.0          19.6        9.3           38.6        5.2         27.1
   3.5          18.9        9.9           36.3        5.9         26.7
   4.0          17.7       10.5           34.3        6.8         26.2
   4.5          17.0       10.2           32.6        6.9         25.7
   5.0          16.5       10.0           31.5        7.0         25.2
   5.5          15.9        9.9           29.9        7.2         24.8
   6.0          15.0       10.0           28.3        7.6         24.5
   6.5          14.3       10.1           27.0        7.9         24.1
   7.0          13.7        9.8           25.7        7.7         23.8
   7.5          13.2        9.5           24.6        7.5         23.4
   8.0          12.9        9.1           23.8        7.5         23.1
   8.5          12.8        8.7           23.0        7.5         22.8
   9.0          12.6        8.6           22.4        7.3         22.4
   9.5          12.5        8.4           21.6        7.2         22.1
  10.0          12.4        8.3           21.3        7.2         21.7
  10.5          12.3        8.2           20.7        7.2         21.4
  11.0          12.2        8.2           20.2        7.3         21.0
  11.5          12.0        8.1           19.7        7.4         20.7
  12.0          11.9        8.1           19.2        7.5         20.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       86.2        6.1
     2       91.5        7.7
     3       81.3        9.6
     4       94.3       11.3
     5       81.0       13.3
     6       96.2       14.7
     7       70.1       16.8
     8      106.8       18.4
     9      103.5       20.2
    10      116.4       21.5
    11      116.9       23.6
    12      147.2       25.6
    13      163.4       27.4
    14      118.7       29.5
    15       82.3       31.5
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16      159.3       33.4
17      242.7       36.0
18      170.4       37.7
19      154.9       40.9
20      178.5       42.0
21      186.0       44.8
22      206.7       47.3
23      284.7       49.5
24      316.6       52.5

           HEIGHT  DIRECTION  SPEED  TEMP
            FEET    DEGREES   FT/SEC DEG C

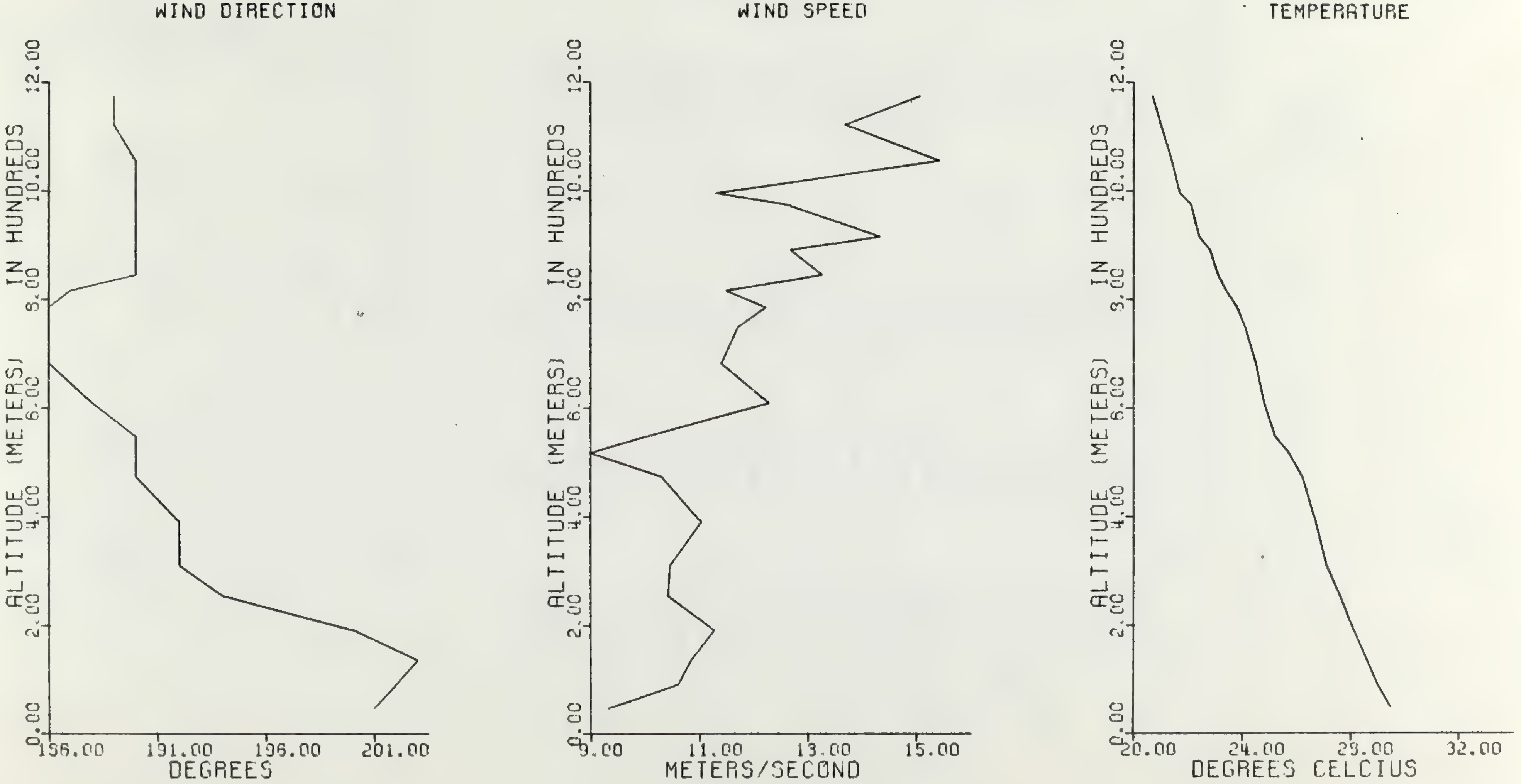
            155.     201.      30.6  29.5
            297.     202.      34.8  29.0
            446.     203.      35.6  28.6
            629.     200.      37.0  28.1
            836.     194.      34.2  27.6
           1019.     192.      34.3  27.1
           1283.     192.      36.2  26.7
           1556.     190.      33.8  26.2
           1699.     190.      29.5  25.7
           1799.     190.      32.9  25.2
           1999.     188.      40.3  24.8
           2238.     186.      37.4  24.5
           2456.     186.      38.4  24.1
           2577.     186.      40.1  23.8
           2677.     187.      37.7  23.4
           2774.     190.      43.5  23.1
           2924.     190.      41.6  22.8
           3006.     190.      47.0  22.4
           3202.     190.      41.2  22.1
           3267.     190.      37.1  21.7
           3462.     190.      50.6  21.4
           3680.     189.      44.9  21.0
           3851.     189.      49.4  20.7

           HEIGHT  DIRECTION  SPEED  TEMP
           METERS   DEGREES   M/SEC  DEG C

             47.     201.       9.3  29.5
             91.     202.      10.6  29.0
            136.     203.      10.9  28.6
            192.     200.      11.3  28.1
            255.     194.      10.4  27.6
            310.     192.      10.5  27.1
            391.     192.      11.0  26.7
            474.     190.      10.3  26.2
            518.     190.       9.0  25.7
            548.     190.      10.0  25.2
            609.     188.      12.3  24.8
            682.     186.      11.4  24.5
            749.     186.      11.7  24.1
            786.     186.      12.2  23.8
            816.     187.      11.5  23.4
            845.     190.      13.3  23.1
            891.     190.      12.7  22.8
            916.     190.      14.3  22.4
            976.     190.      12.6  22.1
            996.     190.      11.3  21.7
           1055.     190.      15.4  21.4
           1122.     189.      13.7  21.0
           1174.     189.      15.1  20.7
```

C-B PIBAL SOUNDING

TIME 1300 DATE 6/12/78



WIND DIRECTION

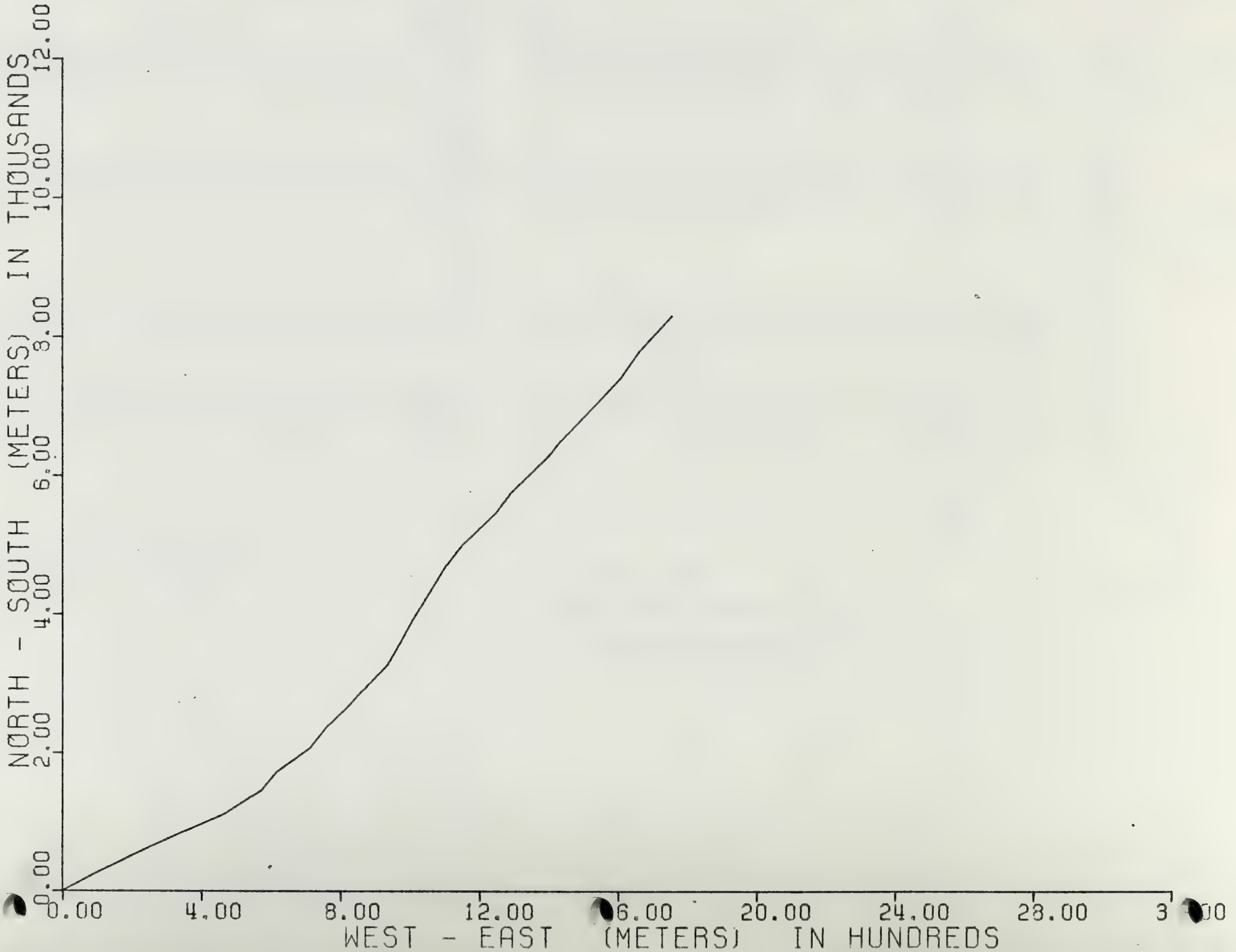
WIND SPEED

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1300   DATE 6/12/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-13-78                                  ** SUSPECT DATA **

BALLOON RELEASED  645 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0

                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0             59.5       -0.0         0.0
   0.5         342.2       34.0             51.4        5.5        20.6
   1.0         347.1       25.2             41.8        8.3        21.3
   1.5         350.2       19.3             32.7        9.8        21.4
   2.0         351.7       17.3             27.4       10.4        21.0
   2.5         354.7       16.5             24.4       11.2        20.6
   3.0         356.7       16.5             23.1       11.7        20.2
   3.5         359.1       16.5             23.0       12.4        19.8
   4.0           1.6       17.5             23.6       12.9        19.1
   4.5           4.6       18.0             24.1       13.4        18.2
   5.0           7.1       18.3             24.9       13.9        17.3
   5.5          10.4       18.5             26.1       14.3        16.4
   6.0          12.9       18.5             27.1       14.4        15.5
   6.5          15.8       18.5             28.3       14.6        14.6
   7.0          18.0       18.5             29.4       14.8        13.7
   7.5          20.2       18.5             30.6       14.9        12.8
   8.0          21.8       18.5             31.5       14.9        11.9
   8.5          23.5       18.5             32.2       15.0        11.0
   9.0          24.9       18.4             32.9       15.1        10.1
   9.5          25.7       18.3             33.8       15.1         9.2
  10.0          26.7       18.2             34.1       15.0         8.3
  10.5          27.5       17.9             34.2       15.0         7.5
  11.0          27.8       17.6             34.0       15.0         6.7
  11.5          28.2       17.5             34.0       14.8         5.8
  12.0          28.4       17.2             33.8       14.7         5.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       77.0        5.9
     2       65.7        7.6
     3      121.5       10.1
     4      133.8       12.2
     5      187.5       14.7
     6      192.8       16.4
     7      286.1       17.9
     8      218.7       19.0
     9      194.9       20.8
    10      229.4       22.2
    11      249.2       24.3
    12      239.3       25.9
    13      242.5       28.2
    14      271.6       29.9
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      16       251.2        32.7
      17       216.0        35.2
      18       234.2        37.3
      19       316.3        36.3
      20       239.0        38.6
      21       248.3        42.1
      22       275.0        45.5
      23       157.1        47.6
      24       150.0        51.0

           HEIGHT  DIRECTION   SPEED   TEMP
            FEET    DEGREES   FT/SEC  DEG C

             593.     168.      34.1   20.6
             983.     173.      46.9   21.3
            1326.     175.      49.2   21.4
            1605.     180.      45.5   21.0
            1963.     187.      39.9   20.6
            2250.     194.      30.2   20.2
            2519.     207.      24.4   19.8
            2812.     211.      28.2   19.1
            3190.     213.      31.3   18.2
            3496.     219.      33.8   17.3
            3886.     221.      36.4   16.4
            4165.     222.      39.2   15.5
            4569.     225.      39.7   14.6
            4874.     230.      33.8   13.7
            5155.     234.      29.2   12.8
            5349.     227.      36.1   11.9
            5785.     223.      43.8   11.0
            6131.     255.      14.6   10.1
            5945.     245.      15.3    9.2
            6296.     217.      54.1    8.3
            6811.     213.      63.9    7.5
            7307.     212.      50.9    6.7
            7571.     212.      50.9    5.3

           HEIGHT  DIRECTION   SPEED   TEMP
           METERS   DEGREES    M/SEC  DEG C

             181.     168.      10.4   20.6
             300.     173.      14.3   21.3
             404.     175.      15.0   21.4
             489.     180.      13.9   21.0
             598.     187.      12.2   20.6
             686.     194.       9.2   20.2
             768.     207.       7.4   19.8
             857.     211.       8.6   19.1
             972.     213.       9.5   18.2
            1066.     219.      10.3   17.3
            1185.     221.      11.1   16.4
            1270.     222.      11.9   15.5
            1393.     225.      12.1   14.6
            1486.     230.      10.3   13.7
            1571.     234.       8.9   12.8
            1630.     227.      11.0   11.9
            1763.     223.      13.4   11.0
            1869.     255.       4.5   10.1
            1812.     245.       4.7    9.2
            1919.     217.      16.5    8.3
            2076.     213.      19.5    7.5
            2227.     212.      15.5    6.7
            2308.     212.      15.5    5.8
```
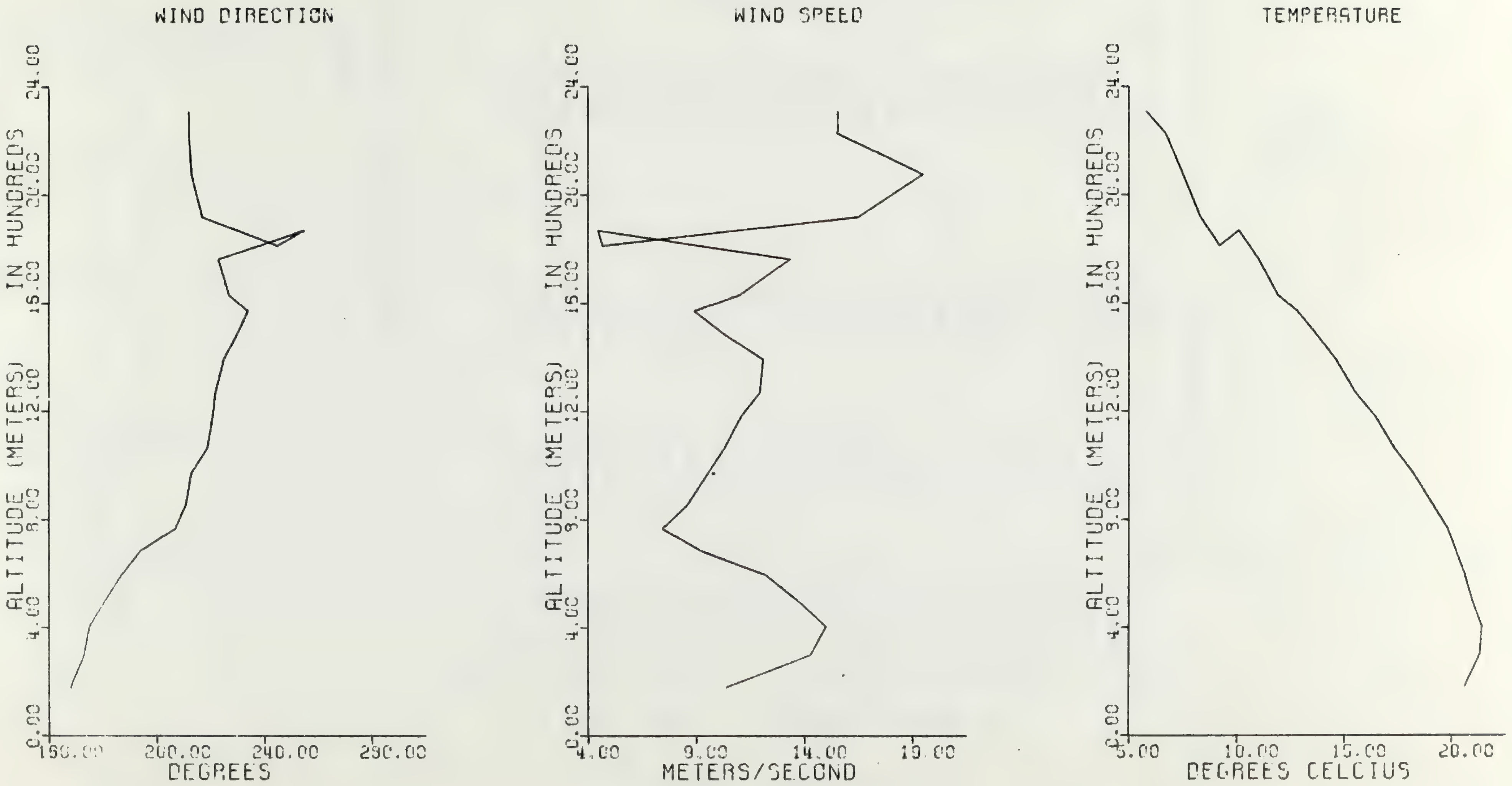

C-B PIBAL SOUNDING

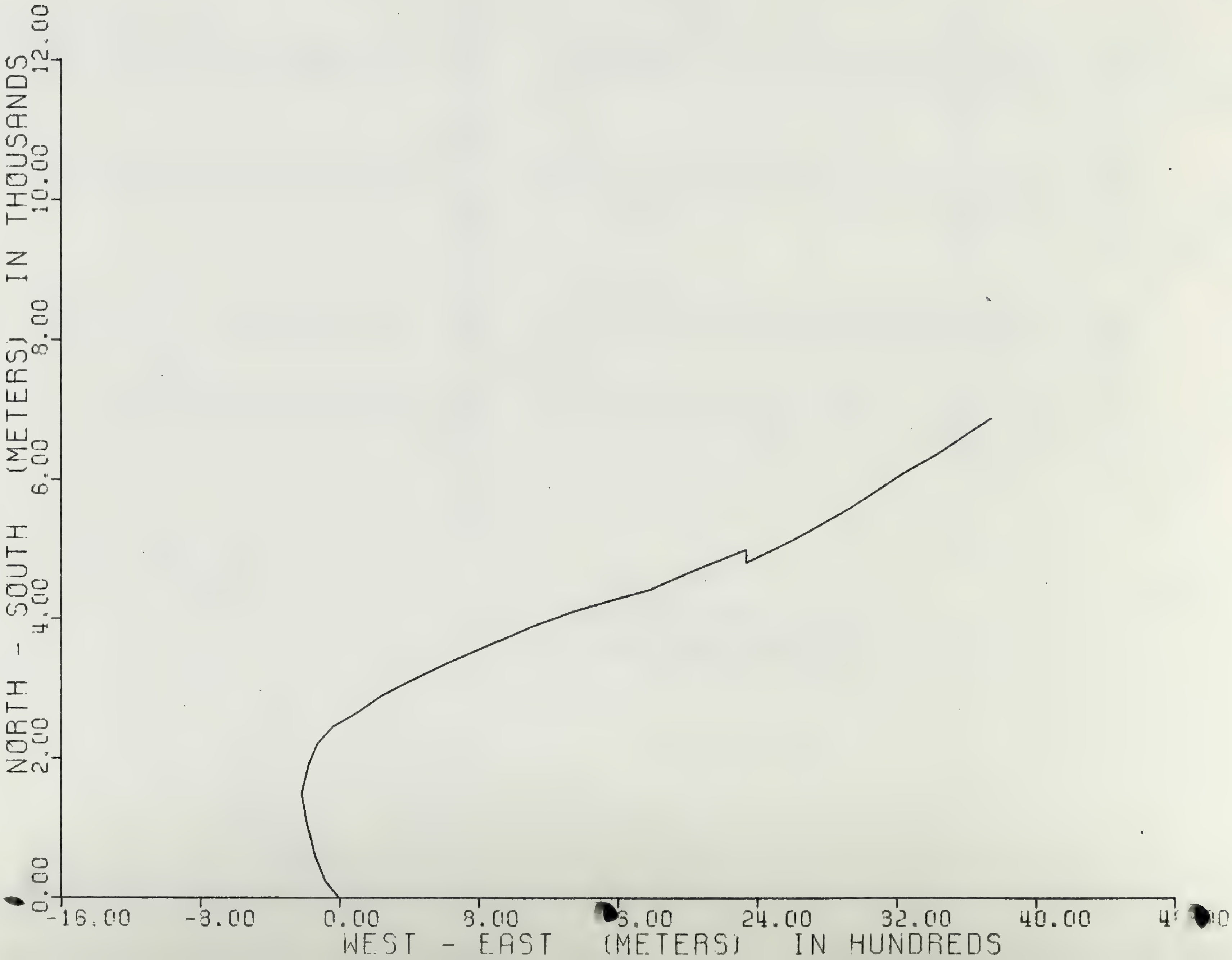
TIME 645   DATE 6/13/78



C-B PIBAL SOUNDING

TIME 645 DATE 6/13/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-13-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1                THEODOLITE #2

   TIME        AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0             0.0        0.0            59.5       -0.0        0.0
   0.5           339.1       26.1            50.9        4.5       29.9
   1.0           345.5       24.8            43.7        7.6       29.7
   1.5           349.4       21.2            37.5        8.9       28.7
   2.0           350.3       21.9            32.4       11.3       27.8
   2.5           352.8       23.8            29.6       13.9       26.8
   3.0           354.0       23.2            27.3       14.4       25.9
   3.5           355.0       20.9            24.6       14.1       24.9
   4.0           356.0       19.4            22.6       13.7       24.0
   4.5           357.4       16.6            21.2       12.2       23.7
   5.0           359.2       14.6            20.4       11.0       23.3
   5.5             0.6       13.5            19.9       10.7       23.0
   6.0             1.2       13.2            19.0       10.7       22.7
   6.5             1.1       12.5            17.9       10.2       22.3
   7.0             0.9       12.2            16.6       10.4       22.0
   7.5             0.9       11.8            15.7       10.3       21.6
   8.0             0.8       11.8            14.9       10.4       21.3
   8.5             0.7       11.9            14.0       10.7       21.0
   9.0             0.7       12.2            13.5       10.9       20.5
   9.5             0.8       12.2            13.1       10.9       20.0
  10.0             0.8       12.3            12.6       11.2       19.4
  10.5             1.0       12.5            12.4       11.4       18.9
  11.0             1.2       12.6            12.3       11.6       18.4
  11.5             1.4       12.4            12.0       11.3       17.8
  12.0             1.6       12.2            11.9       11.1       17.3


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1       111.8        5.8
     2       104.3        7.1
     3       105.6        8.7
     4       119.2       10.3
     5       151.2       11.9
     6       137.6       13.2
     7       175.9       14.9
     8       169.3       16.6
     9       175.6       18.3
    10       161.7       20.3
    11       235.7       22.1
    12       241.7       23.9
    13       207.5       25.5
    14       282.4       27.6
    15       315.7       29.4
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16      251.2        32.7
16      317.9        31.1
17      358.2        33.2
18      316.7        34.6
19      295.1        36.1
20      355.7        37.8
21      351.8        39.1
22      389.2        40.2
23      313.7        42.0
24      290.5        43.2


          HEIGHT  DIRECTION  SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

           459.     166.       29.6  29.9
           849.     175.       31.5  29.7
          1108.     175.       32.8  28.7
          1545.     179.       30.5  27.8
          2083.     182.       27.1  26.8
          2343.     180.       29.9  25.9
          2507.     181.       33.9  24.9
          2665.     184.       34.5  24.0
          2585.     189.       37.2  23.7
          2556.     192.       37.0  23.3
          2642.     190.       35.5  23.0
          2838.     183.       33.3  22.7
          2879.     180.       35.5  22.3
          3106.     180.       37.8  22.0
          3243.     180.       33.3  21.6
          3442.     180.       35.6  21.3
          3743.     180.       33.2  21.0
          3990.     181.       27.1  20.5
          4159.     181.       29.6  20.0
          4429.     183.       28.2  19.4
          4664.     187.       22.2  18.9
          4850.     186.       27.5  18.4
          4971.     186.       28.8  17.8

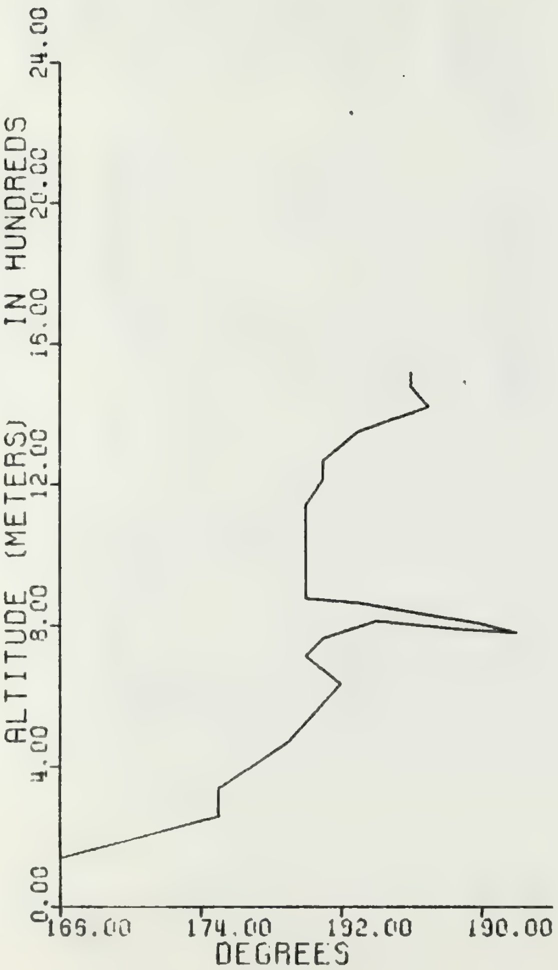

          HEIGHT  DIRECTION  SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

           140.     166.        9.0  29.9
           259.     175.        9.6  29.7
           338.     175.       10.0  28.7
           471.     179.        9.3  27.8
           635.     182.        8.3  26.8
           714.     180.        9.1  25.9
           764.     181.       10.3  24.9
           812.     184.       10.5  24.0
           788.     189.       11.3  23.7
           779.     192.       11.3  23.3
           805.     190.       10.8  23.0
           865.     183.       10.1  22.7
           877.     180.       10.8  22.3
           947.     180.       11.5  22.0
           989.     180.       10.1  21.6
          1049.     180.       10.9  21.3
          1141.     180.       10.1  21.0
          1216.     181.        8.3  20.5
          1268.     181.        9.0  20.0
          1350.     183.        8.6  19.4
          1422.     187.        6.8  18.9
          1478.     186.        8.4  18.4
          1515.     186.        8.8  17.8
```

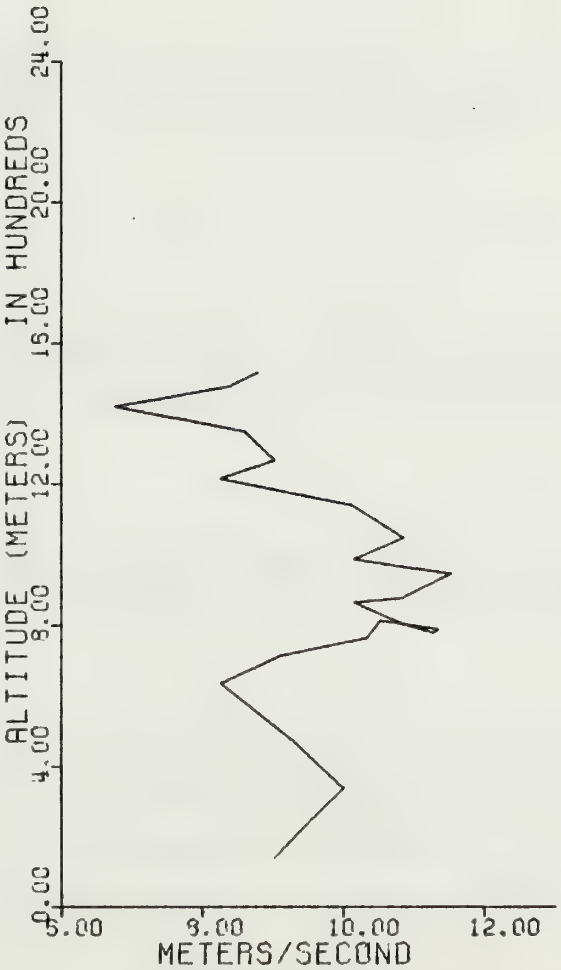
C-B PIBAL SOUNDING

TIME 1330   DATE 6/13/78

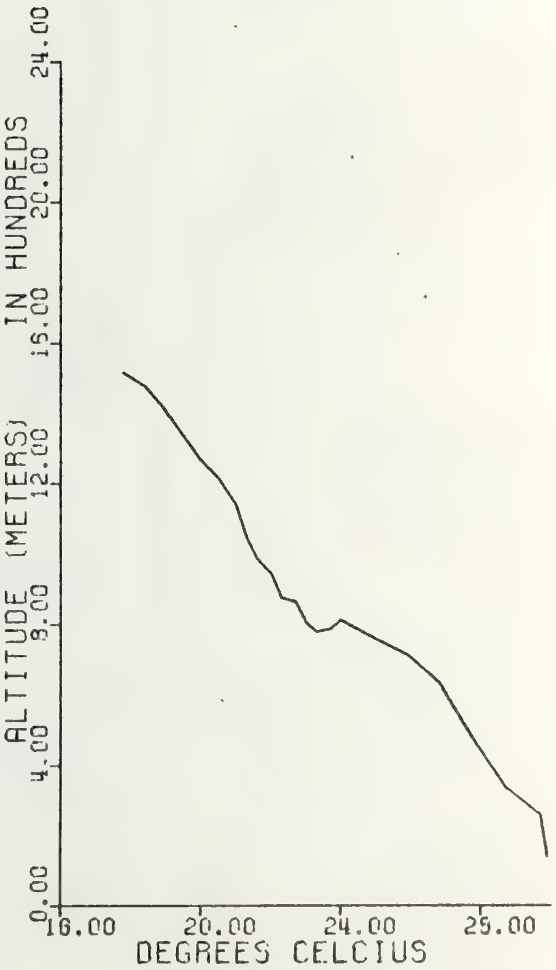
WIND DIRECTION



WIND SPEED



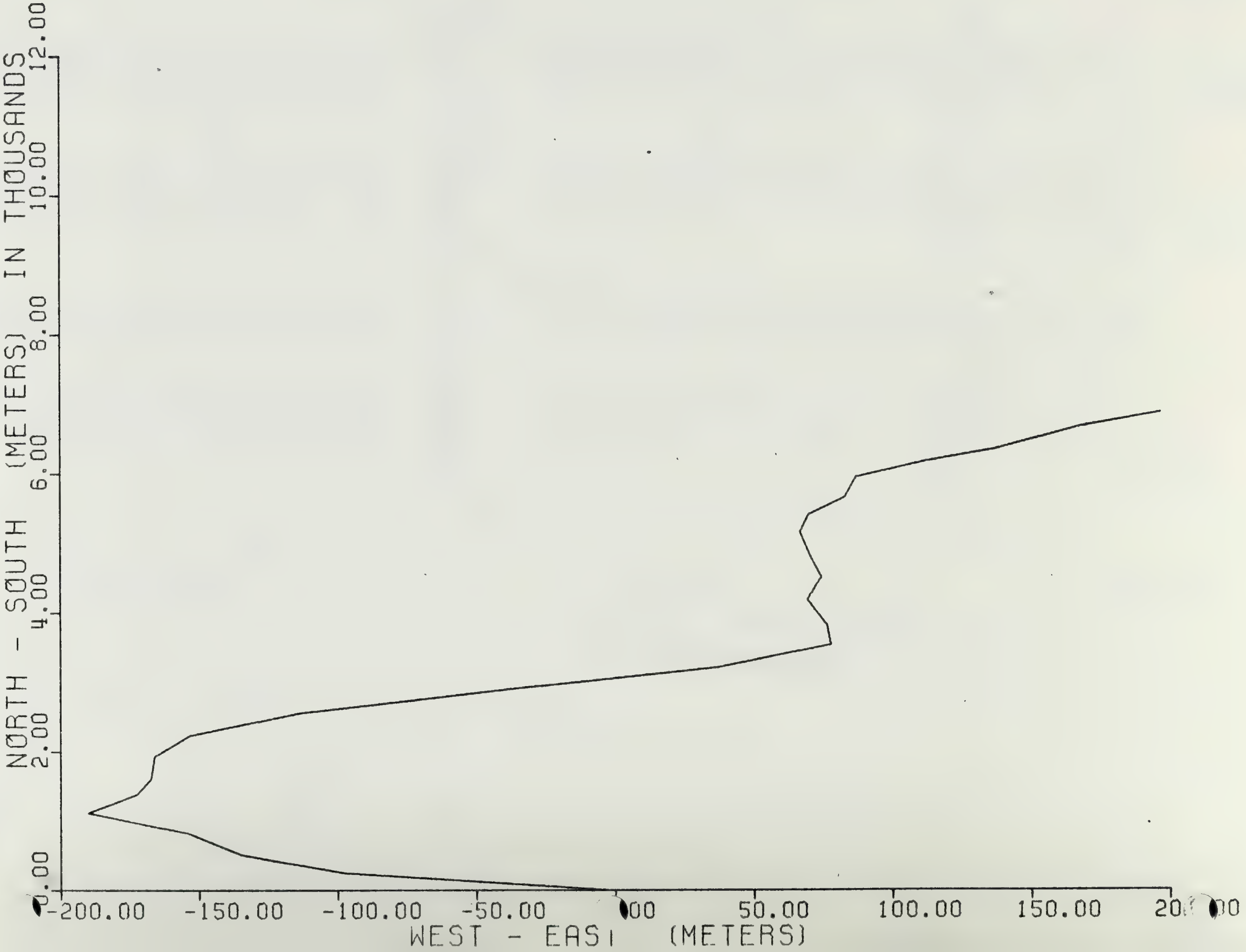
TEMPERATURE



C-B PIBAL SØUNDING

TIME 1330   DATE 6/13/78

PIBAL TRAJECTØRY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-15-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                 THEODOLITE #1              THEODOLITE #2

   TIME        AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0             0.0        0.0            59.5       -0.0          0.0
   0.5           293.8       33.4            56.8        2.1         19.3
   1.0           329.8       30.2            51.4        4.9         20.8
   1.5           344.7       28.8            47.8        6.9         20.8
   2.0           357.6       23.3            42.3        8.8         20.8
   2.5             3.2       21.3            39.3        9.9         20.2
   3.0             8.3       18.7            36.5       10.5         19.6
   3.5            11.6       17.0            34.7       10.6         19.0
   4.0            14.7       15.6            33.4       10.7         18.4
   4.5            17.2       14.9            32.8       10.8         17.8
   5.0            18.8       14.0            32.0       10.6         16.9
   5.5            19.7       13.6            31.4       10.7         16.1
   6.0            20.5       13.0            30.9       10.7         15.2
   6.5            20.9       12.7            30.6       10.6         14.3
   7.0            21.1       12.3            30.0       10.4         13.5
   7.5            21.2       12.0            29.4       10.4         12.6
   8.0            21.1       11.7            28.9       10.4         11.7
   8.5            20.9       11.6            28.3       10.4         10.8
   9.0            20.5       11.4            27.5       10.4         10.0
   9.5            20.3       11.2            27.0       10.3          9.1
  10.0            20.0       11.0            26.4       10.2          8.2
  10.5            19.7       10.8            25.9       10.1          7.4
  11.0            19.4       10.7            25.3       10.0          6.7
  11.5            19.2       10.6            25.0       10.0          5.9
  12.0            19.2       10.3            24.6        9.9          5.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1        71.2        4.9
     2       104.1        5.6
     3       115.0        6.5
     4       154.1        8.3
     5       179.5        9.9
     6       221.7       12.3
     7       230.1       14.7
     8       257.8       17.7
     9       261.7       20.7
    10       249.5       24.1
    11       272.2       27.1
    12       336.3       30.4
    13       337.1       32.5
    14       318.7       35.5
    15       357.9       38.8
```

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16        251.2        32.7
16        428.8        41.1
17        430.1        43.7
18        471.5        46.9
19        480.8        49.3
20        491.3        52.1
21        512.8        54.2
22        477.6        57.5
23        520.6        58.7
24        602.3        63.2


      HEIGHT   DIRECTION   SPEED   TEMP
       FEET     DEGREES   FT/SEC  DEG C

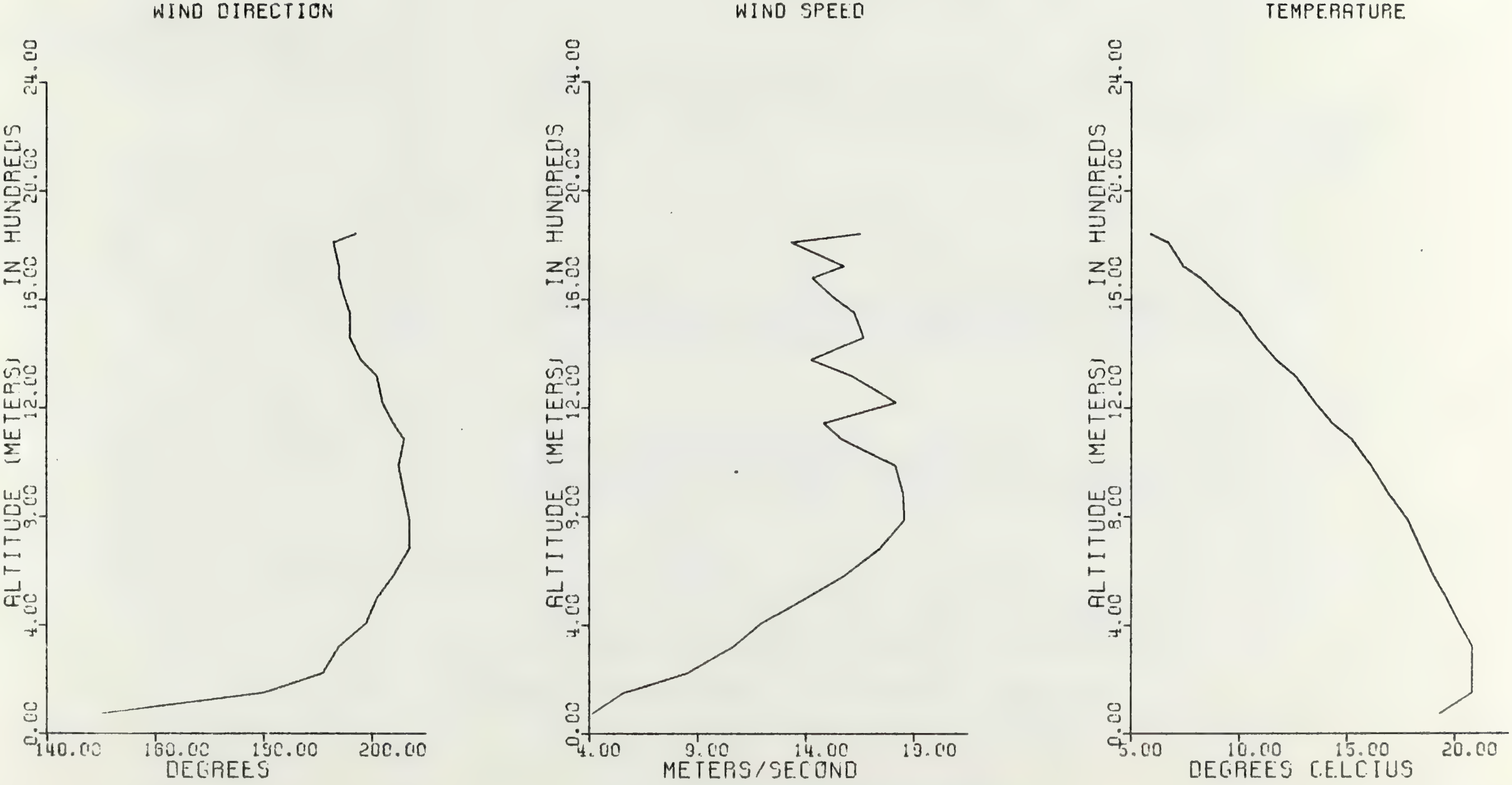
        240.     150.       13.6   19.3
        494.     180.       18.3   20.8
        733.     191.       28.0   20.8
       1059.     194.       35.0   20.8
       1336.     199.       39.2   20.2
       1644.     201.       46.0   19.6
       1910.     204.       51.7   19.0
       2240.     207.       57.2   18.4
       2587.     207.       60.9   17.8
       2911.     206.       60.7   16.9
       3246.     205.       59.5   16.1
       3565.     206.       51.3   15.2
       3754.     204.       48.6   14.3
       4004.     202.       59.6   13.5
       4322.     201.       52.9   12.6
       4521.     198.       46.7   11.7
       4790.     196.       54.7   10.8
       5089.     196.       53.2   10.0
       5284.     195.       50.0    9.1
       5507.     194.       46.9    8.2
       5649.     194.       51.7    7.4
       5938.     193.       43.7    6.7
       6040.     197.       54.1    5.9


      HEIGHT   DIRECTION   SPEED   TEMP
      METERS    DEGREES   M/SEC   DEG C

         73.     150.        4.1   19.3
        150.     180.        5.6   20.8
        223.     191.        8.5   20.8
        323.     194.       10.7   20.8
        407.     199.       11.9   20.2
        501.     201.       14.0   19.6
        582.     204.       15.8   19.0
        683.     207.       17.4   18.4
        789.     207.       18.6   17.8
        887.     206.       18.5   16.9
        989.     205.       18.1   16.1
       1087.     206.       15.6   15.2
       1144.     204.       14.8   14.3
       1220.     202.       18.2   13.5
       1317.     201.       16.1   12.6
       1378.     198.       14.2   11.7
       1460.     196.       16.7   10.8
       1551.     196.       16.2   10.0
       1610.     195.       15.2    9.1
       1678.     194.       14.3    8.2
       1722.     194.       15.8    7.4
       1810.     193.       13.3    6.7
       1841.     197.       16.5    5.9
```

C-B PIBAL SOUNDING

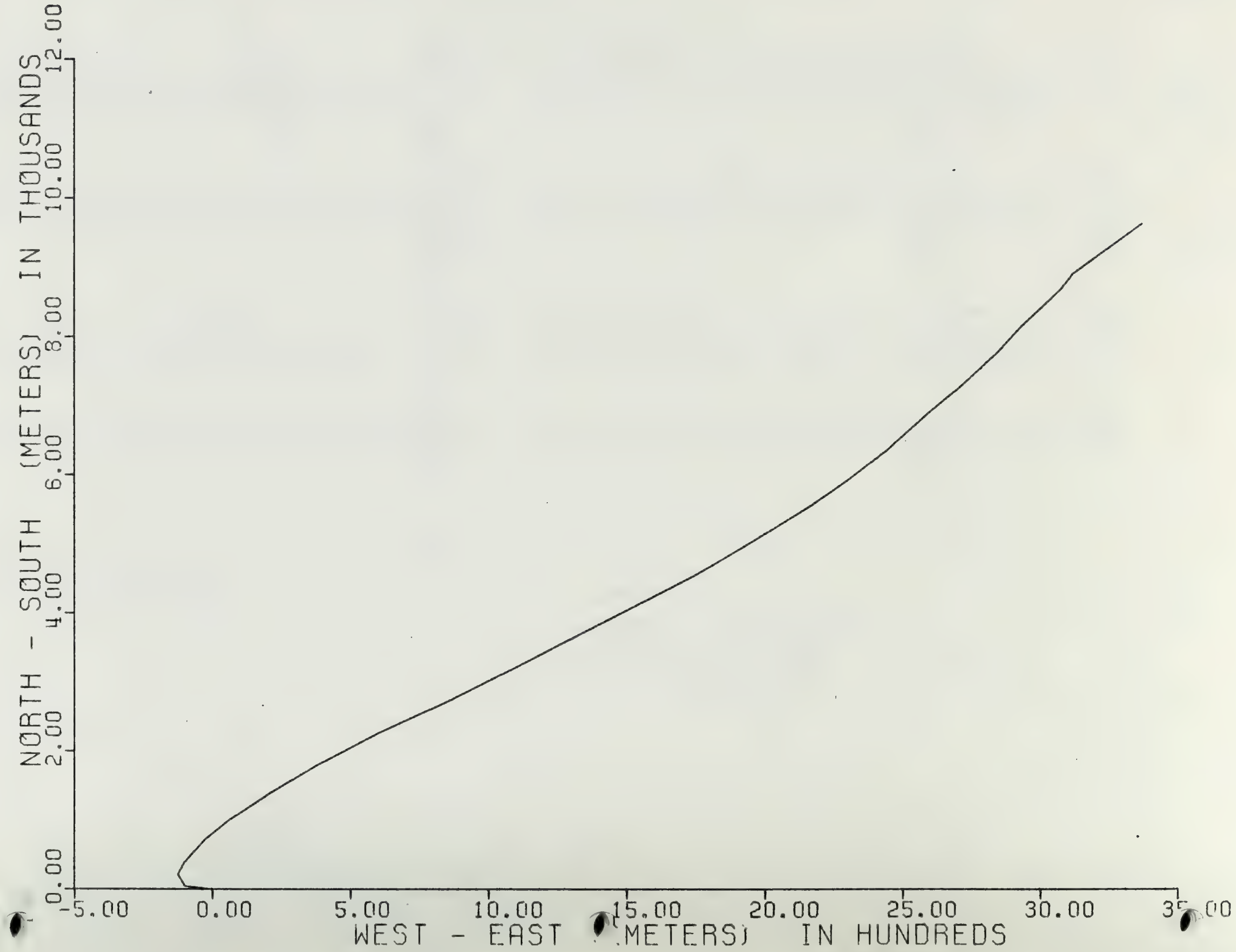
TIME 645 DATE 6/15/78



C-B PIBAL SØUNDING

TIME 645 DATE 6/15/78

PIBAL TRAJECTØRY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-15-78

BALLOON RELEASED 1350 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1                THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           59.5       -0.0         0.0
   0.5           11.8       24.2           55.1        3.0        19.2
   1.0            0.6       17.7           46.6        5.1        18.4
   1.5            0.0       18.8           40.2        8.0        17.3
   2.0            0.3       19.9           34.6       10.6        15.9
   2.5            2.4       21.5           31.8       12.9        14.5
   3.0            3.6       20.8           29.9       14.0        13.1
   3.5            4.7       21.6           27.8       15.0        11.7
   4.0            5.7       22.4           26.8       16.3        10.4
   4.5            6.8       23.8           26.5       16.7         9.1
   5.0            8.2       24.0           26.5       17.0         7.8
   5.5           10.1       23.5           26.9       17.5         6.9
   6.0           11.6       22.9           28.1       17.9         6.0
   6.5           12.9       23.3           27.4       18.3         5.1
   7.0           13.6       24.0           27.5       19.1         3.9
   7.5           14.1       25.3           27.5       20.3         2.2
   8.0           14.4       26.8           27.3       21.7         0.6
   8.5           14.7       26.8           27.0       22.0        -1.1
   9.0           14.4       26.6           26.0       22.1        -2.7
   9.5           15.3       26.0           26.0       22.1        -4.4
  10.0           16.5       25.7           26.4       21.9        -6.0
  10.5           17.6       24.8           26.4       21.4        -6.9
  11.0           17.9       24.5           26.5       21.3        -7.8
  11.5           18.8       23.6           26.8       20.7        -8.7
  12.0           19.9       22.3           27.1       19.8        -9.6


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO         ERROR

     1       114.7          5.8
     2       130.4          7.3
     3       160.5          9.1
     4       166.6         11.2
     5       183.3         13.3
     6       303.5         15.1
     7       227.4         17.3
     8       270.4         19.2
     9        65.4         20.2
    10        28.4         21.4
    11       171.5         23.1
    12       421.9         23.3
    13       304.6         26.2
    14       336.7         27.3
   16     341.4        30.0
   17     366.3        31.6
   18     337.6        33.8
   19     428.7        36.5
   20     386.0        38.6
   21     366.9        42.6
   22     415.2        43.5
   23     435.2        45.9
   24     455.7        49.8


         HEIGHT   DIRECTION   SPEED   TEMP
          FEET     DEGREES   FT/SEC  DEG C

          323.       180.      28.9   19.2
          584.       177.      36.3   18.4
         1018.       180.      40.0   17.3
         1557.       185.      40.1   15.9
         2139.       190.      35.3   14.5
         2490.       190.      36.7   13.1
         3040.       191.      35.8   11.7
         3565.       197.      23.8   10.4
         3926.       205.      19.0    9.1
         4218.       209.      26.5    7.8
         4566.       223.      19.2    6.9
         4587.       210.      28.4    6.0
         5278.       203.      34.8    5.1
         5704.       208.      17.7    3.9
         6285.       203.      18.5    2.2
         7008.       200.      23.5    0.6
         7427.       194.      33.2   -1.1
         7947.       198.      43.8   -2.7
         8489.       209.      43.8   -4.4
         8895.       209.      56.5   -6.0
         9552.       207.      45.7   -6.9
         9678.       211.      32.6   -7.8
         9907.       211.      62.4   -8.7


         HEIGHT   DIRECTION   SPEED   TEMP
         METERS    DEGREES   M/SEC   DEG C

           98.       180.       8.8   19.2
          178.       177.      11.1   18.4
          310.       180.      12.2   17.3
          475.       185.      12.2   15.9
          652.       190.      10.8   14.5
          759.       190.      11.2   13.1
          927.       191.      10.9   11.7
         1087.       197.       7.3   10.4
         1197.       205.       5.8    9.1
         1286.       209.       8.1    7.8
         1392.       223.       5.9    6.9
         1398.       210.       8.7    6.0
         1609.       203.      10.6    5.1
         1738.       208.       5.4    3.9
         1916.       203.       5.6    2.2
         2136.       200.       7.2    0.6
         2264.       194.      10.1   -1.1
         2422.       198.      13.4   -2.7
         2587.       209.      13.4   -4.4
         2711.       209.      17.2   -6.0
         2912.       207.      13.9   -6.9
         2950.       211.       9.9   -7.8
         3020.       211.      19.0   -8.7
```
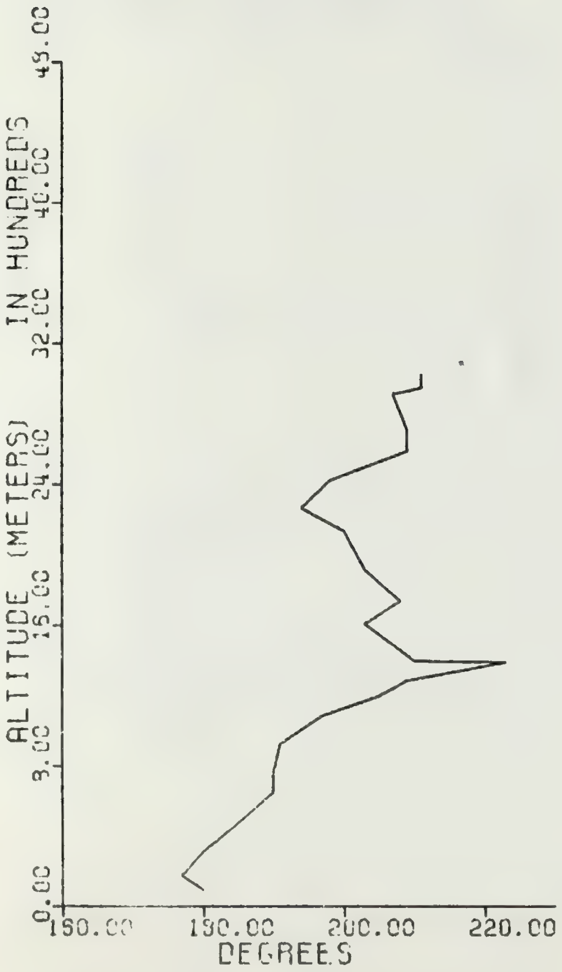
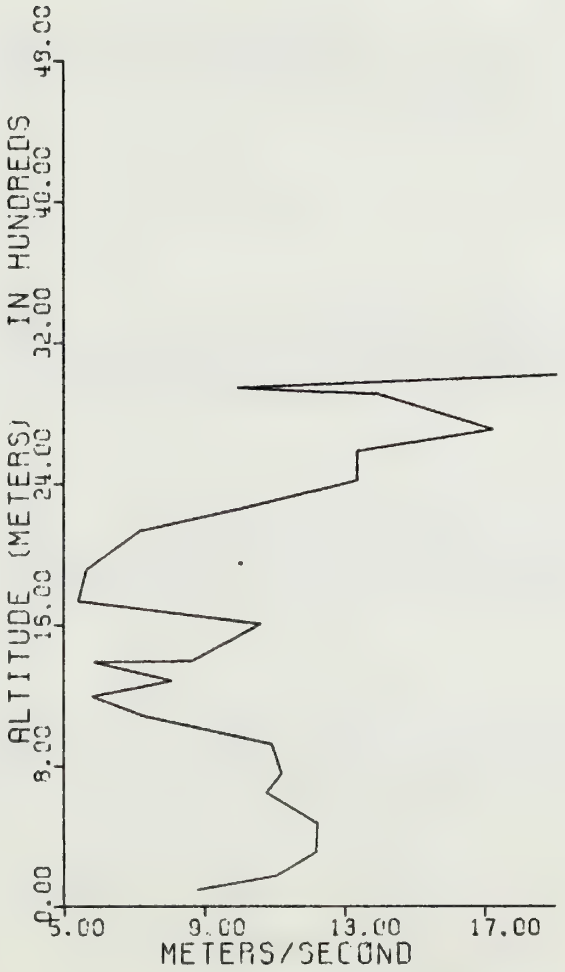

C-B PIBAL SOUNDING

TIME 1350   DATE 6/15/78

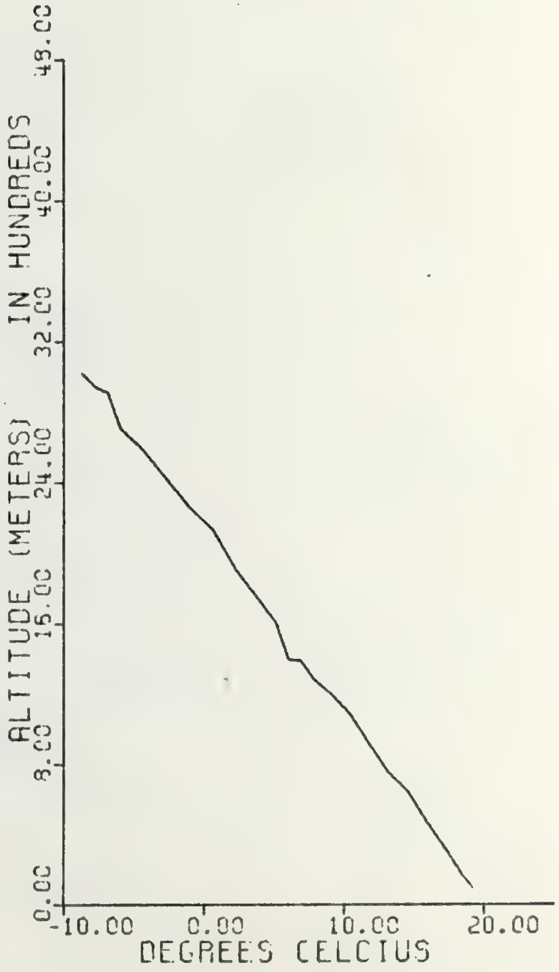
WIND DIRECTION



WIND SPEED



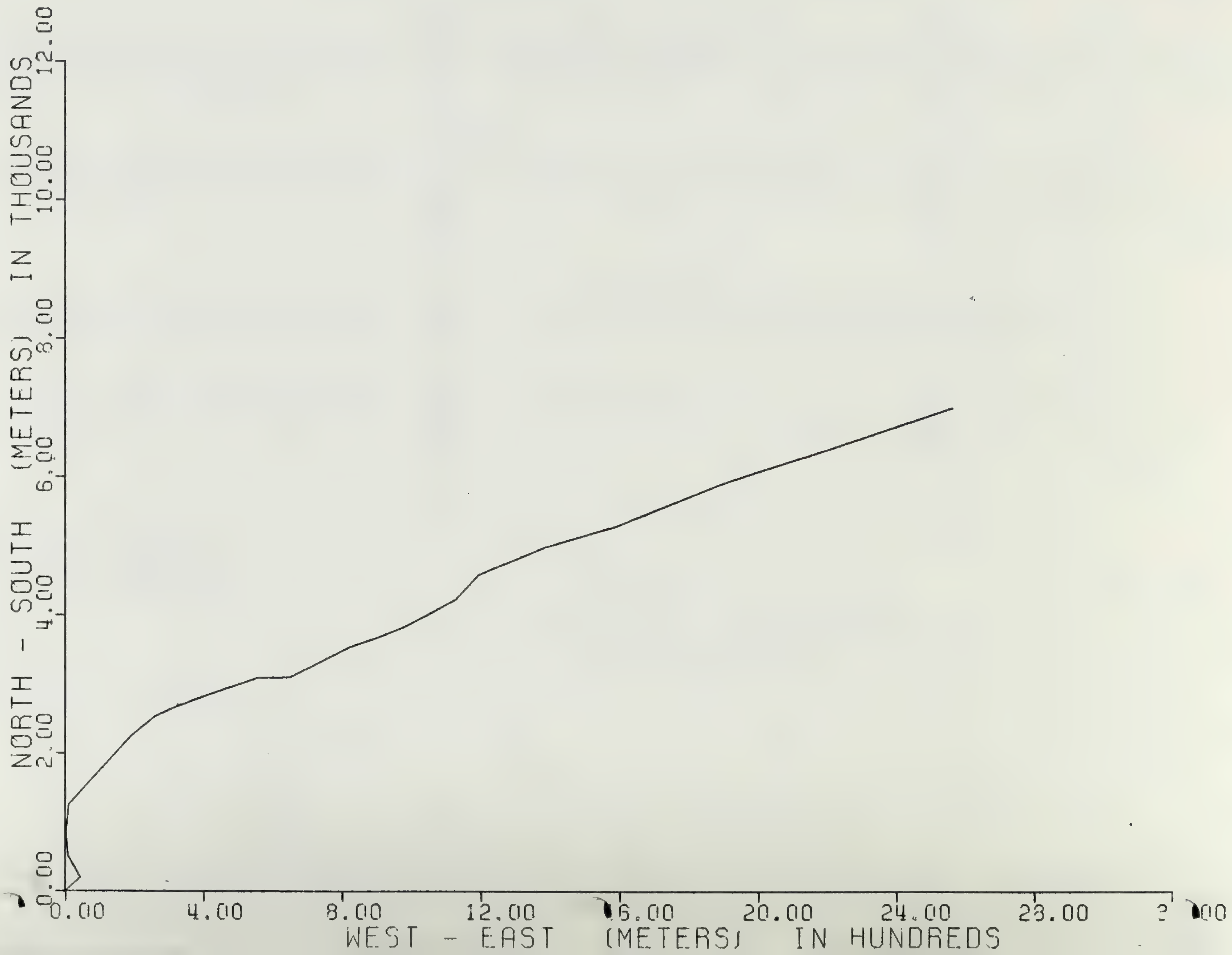
TEMPERATURE



C-B PIBAL SOUNDING

TIME 1350   DATE 6/15/78

PIBAL TRAJECTORY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-16-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


               THEODOLITE #1               THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           59.5       -0.0        0.0
   0.5         351.3       26.8           54.8        2.7       18.2
   1.0           3.8       22.7           49.8        5.1       13.7
   1.5           9.2       19.1           45.0        6.6       19.1
   2.0          12.2       16.4           41.0        7.7       18.9
   2.5          13.4       15.6           38.0        8.6       18.2
   3.0          15.0       15.1           35.8        9.4       17.6
   3.5          16.4       14.6           34.5        9.7       16.9
   4.0          17.6       13.8           33.4        9.8       16.3
   4.5          18.7       13.4           32.6        9.8       15.6
   5.0          20.0       12.7           32.5        9.7       15.0
   5.5          21.2       12.2           32.3        9.5       14.3
   6.0          22.3       11.7           32.2        9.4       13.7
   6.5          23.5       11.3           32.4        9.2       13.0
   7.0          24.4       10.9           32.5        9.0       12.5
   7.5          25.0       10.7           32.6        8.9       12.0
   8.0          25.7       10.5           32.6        8.9       11.5
   8.5          26.1       10.5           32.6        8.9       11.0
   9.0          26.4       10.4           32.6        9.0       11.2
   9.5          27.0       10.3           32.5        9.1       11.3
  10.0          27.2       10.3           32.5        9.1       11.5
  10.5          27.4       10.2           32.4        9.2       11.6
  11.0          27.4       10.0           32.3        9.2       11.8
  11.5          27.4       10.0           32.2        9.3       11.9
  12.0          27.5        9.9           31.9        9.3       12.1


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      100.7       5.5
     2      111.2       6.8
     3      111.0       8.5
     4      155.9      10.7
     5      174.9      12.8
     6      202.8      15.3
     7      204.4      17.5
     8      232.4      20.0
     9      203.3      22.6
    10      248.5      24.8
    11      226.6      27.5
    12      249.9      30.4
    13      235.7      33.1
    14      230.4      35.8
    15      221.9      37.7
```

```
16      237.2       41.1
17      203.3       43.3
18      262.9       45.4
19      290.1       50.8
20      270.2       52.6
21      343.3       55.8
22      435.2       57.0
23      486.3       58.3
24      506.6       63.8


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC DEG C

          287.     184.      22.2  18.2
          579.     194.      31.3  18.7
          856.     197.      39.4  19.1
         1130.     197.      42.0  18.9
         1428.     199.      43.9  18.2
         1775.     201.      44.7  17.6
         2049.     203.      45.1  16.9
         2300.     204.      48.3  16.3
         2571.     208.      45.1  15.6
         2731.     210.      46.3  15.0
         2944.     210.      53.3  14.3
         3176.     212.      53.7  13.7
         3367.     214.      51.8  13.0
         3542.     214.      44.4  12.5
         3680.     213.      50.9  12.0
         3978.     212.      53.2  11.5
         4191.     212.      40.1  11.0
         4391.     211.      70.9  11.2
         4923.     211.      67.7  11.3
         5090.     211.      46.6  11.5
         5403.     209.      42.5  11.6
         5470.     207.      24.1  11.8
         5622.     208.      63.4  11.9

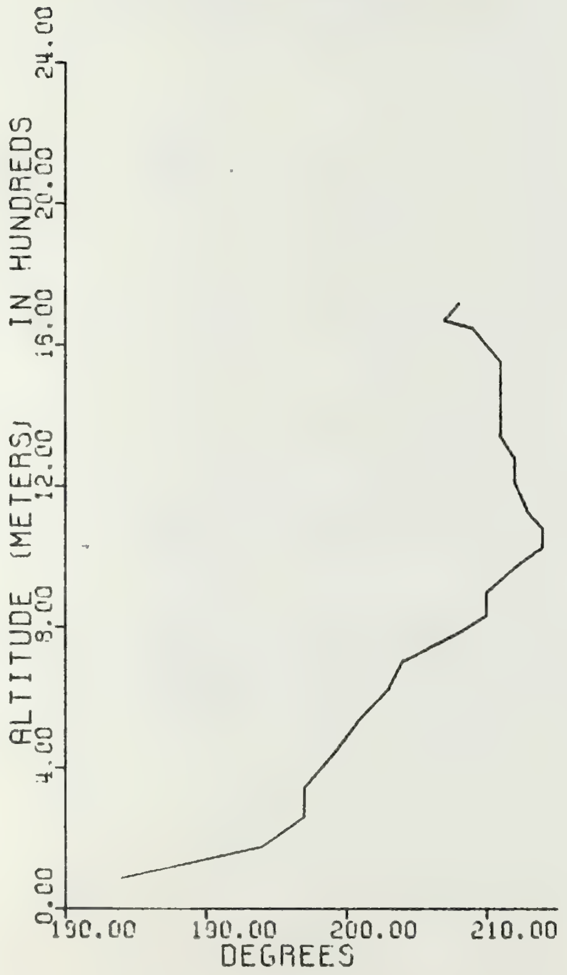

        HEIGHT  DIRECTION   SPEED  TEMP
        METERS   DEGREES    M/SEC  DEG C

           87.     184.       6.8  18.2
          176.     194.       9.5  18.7
          261.     197.      12.0  19.1
          344.     197.      12.8  18.9
          435.     199.      13.4  18.2
          541.     201.      13.6  17.6
          624.     203.      13.7  16.9
          701.     204.      14.7  16.3
          784.     208.      13.7  15.6
          833.     210.      14.1  15.0
          897.     210.      16.2  14.3
          968.     212.      16.4  13.7
         1026.     214.      15.8  13.0
         1079.     214.      13.5  12.5
         1122.     213.      15.5  12.0
         1212.     212.      16.2  11.5
         1278.     212.      12.2  11.0
         1338.     211.      21.6  11.2
         1500.     211.      20.6  11.3
         1551.     211.      14.2  11.5
         1647.     209.      13.0  11.6
         1667.     207.       7.3  11.8
         1714.     208.      19.3  11.9
```

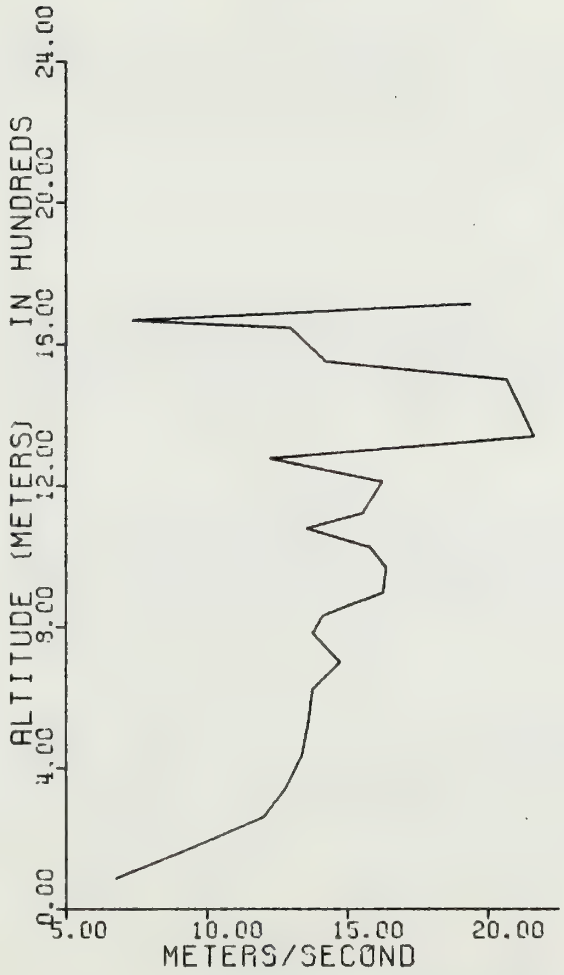
C-B PIBAL SOUNDING

TIME 650 DATE 6/16/78

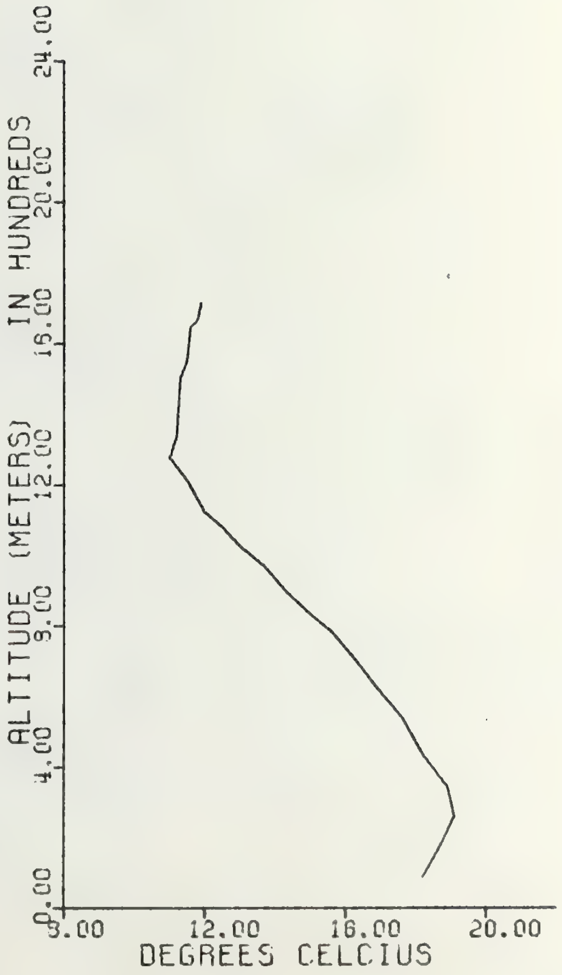
WIND DIRECTION



WIND SPEED



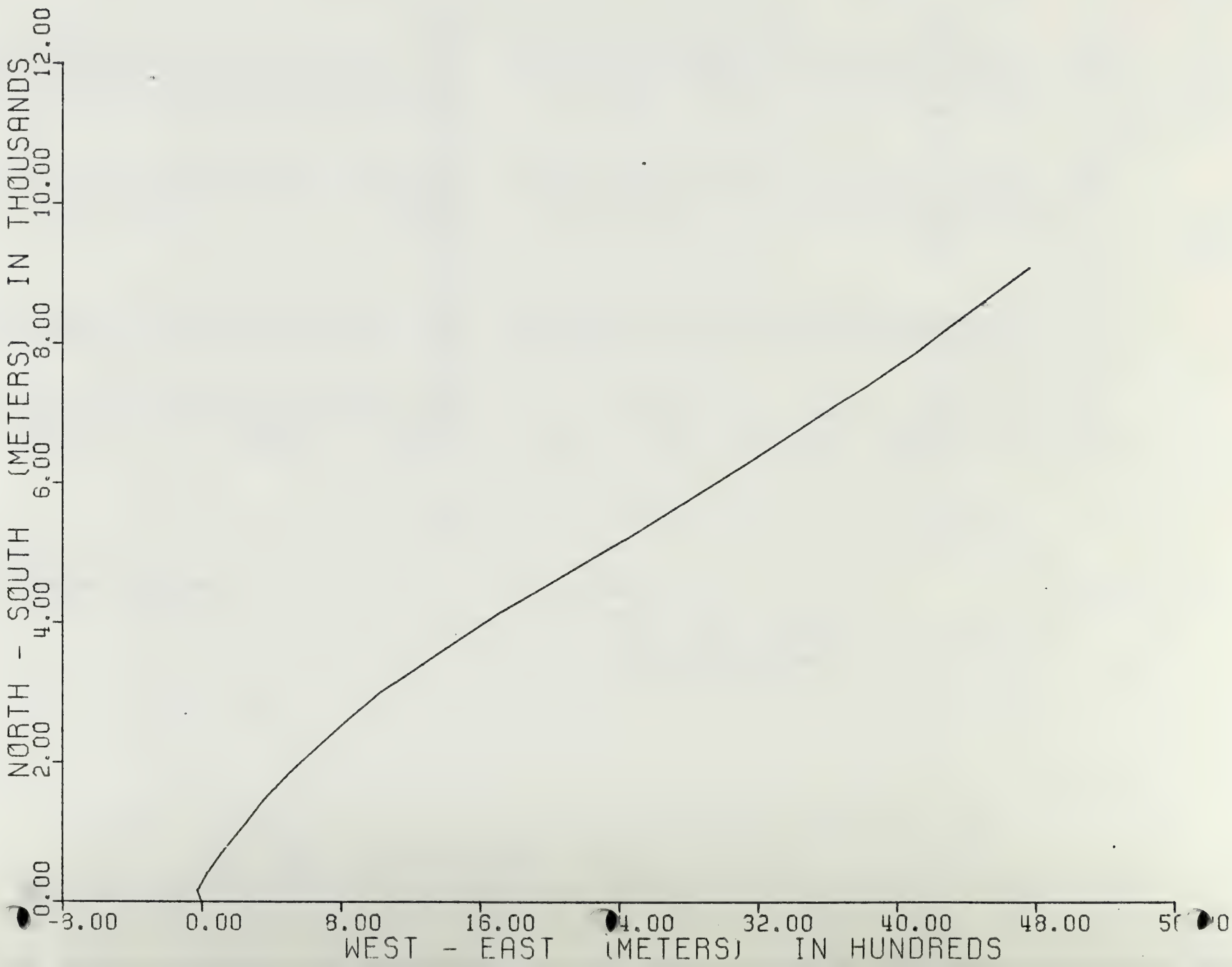
TEMPERATURE



C-B PIBAL SOUNDING

TIME 650   DATE 6/16/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-16-78                                  ** SUSPECT DATA **

BALLOON RELEASED 1300 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            59.5       -0.0        0.0
   0.5           22.8       18.1            55.0        3.1       22.9
   1.0           26.8       22.2            51.4        7.2       20.7
   1.5           24.9       30.8            47.8       12.6       18.4
   2.0           18.1       32.1            42.4       16.3       16.1
   2.5           11.2       33.4            37.2       20.1       14.0
   3.0           10.0       32.2            33.4       21.8       12.1
   3.5           10.2       31.4            32.0       21.7       10.2
   4.0           10.1       29.8            30.1       21.3        8.8
   4.5            9.4       28.0            28.0       21.1        7.8
   5.0            9.8       26.4            26.3       20.6        6.8
   5.5            9.8       25.9            25.9       20.9        5.7
   6.0            9.5       26.0            24.8       21.3        4.7
   6.5            9.1       25.3            24.0       21.2        3.7
   7.0            8.9       25.0            22.7       21.2        2.1
   7.5            8.9       24.6            22.0       21.0        0.5
   8.0            8.9       24.1            21.4       20.9       -0.8
   8.5            8.9       23.2            20.7       20.3       -1.5
   9.0            9.2       22.1            20.3       19.5       -1.8
   9.5            9.8       20.2            20.0       18.6       -2.1
  10.0           10.1       19.4            19.9       17.7       -2.4
  10.5           10.8       18.5            19.9       17.1       -2.7
  11.0           11.2       17.9            19.9       16.5       -3.0
  11.5           11.8       16.4            20.1       16.0       -3.6
  12.0           12.1       15.3            20.1       15.5       -4.1


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      148.8        6.3
     2      195.3        8.4
     3      128.5       10.4
     4      159.9       12.4
     5      295.1       14.2
     6      372.1       16.8
     7      310.3       18.0
     8      273.0       19.8
     9      343.9       21.8
    10      379.9       23.8
    11      469.0       25.5
    12      461.2       27.2
    13      539.7       28.2
    14      496.2       30.7
    15      466.6       32.4
   16      514.0        34.1
   17      501.1        36.0
   18      494.6        38.0
   19      738.1        40.9
   20      623.5        42.2
   21      669.1        44.9
   22      610.5        46.6
   23     1006.9        47.6
   24     1242.1        48.0


         HEIGHT  DIRECTION  SPEED   TEMP
          FEET    DEGREES   FT/SEC  DEG C

           322.     207.      34.8   22.9
           897.     206.      35.3   20.7
          1850.     189.      34.4   18.4
          2630.     173.      36.6   16.1
          3439.     177.      40.6   14.0
          4212.     187.      34.8   12.1
          4482.     190.      28.3   10.2
          4777.     186.      36.4    8.8
          5100.     188.      39.2    7.8
          5377.     191.      34.6    6.8
          5741.     187.      29.7    5.7
          6199.     183.      24.9    4.7
          6335.     185.      32.8    3.7
          6871.     187.      38.4    2.1
          7167.     188.      31.3    0.5
          7453.     188.      34.9   -0.8
          7638.     191.      38.9   -1.5
          7727.     195.      49.0   -1.8
          7784.     196.      42.7   -2.1
          7691.     199.      39.9   -2.4
          7869.     200.      43.2   -2.7
          7898.     204.      28.5   -3.0
          7616.     209.      17.3   -3.6


         HEIGHT  DIRECTION  SPEED   TEMP
         METERS   DEGREES   M/SEC   DEG C

            98.     207.      10.6   22.9
           273.     206.      10.8   20.7
           564.     189.      10.5   18.4
           802.     173.      11.2   16.1
          1048.     177.      12.4   14.0
          1284.     187.      10.6   12.1
          1366.     190.       8.6   10.2
          1456.     186.      11.1    8.8
          1554.     188.      11.9    7.8
          1639.     191.      10.5    6.8
          1750.     137.       9.1    5.7
          1889.     183.       7.6    4.7
          1931.     185.      10.0    3.7
          2094.     137.      11.7    2.1
          2185.     188.       9.5    0.5
          2272.     188.      10.6   -0.8
          2328.     191.      11.9   -1.5
          2355.     195.      14.9   -1.8
          2373.     196.      13.0   -2.1
          2344.     199.      12.2   -2.4
          2398.     200.      13.2   -2.7
          2407.     204.       8.7   -3.0
```
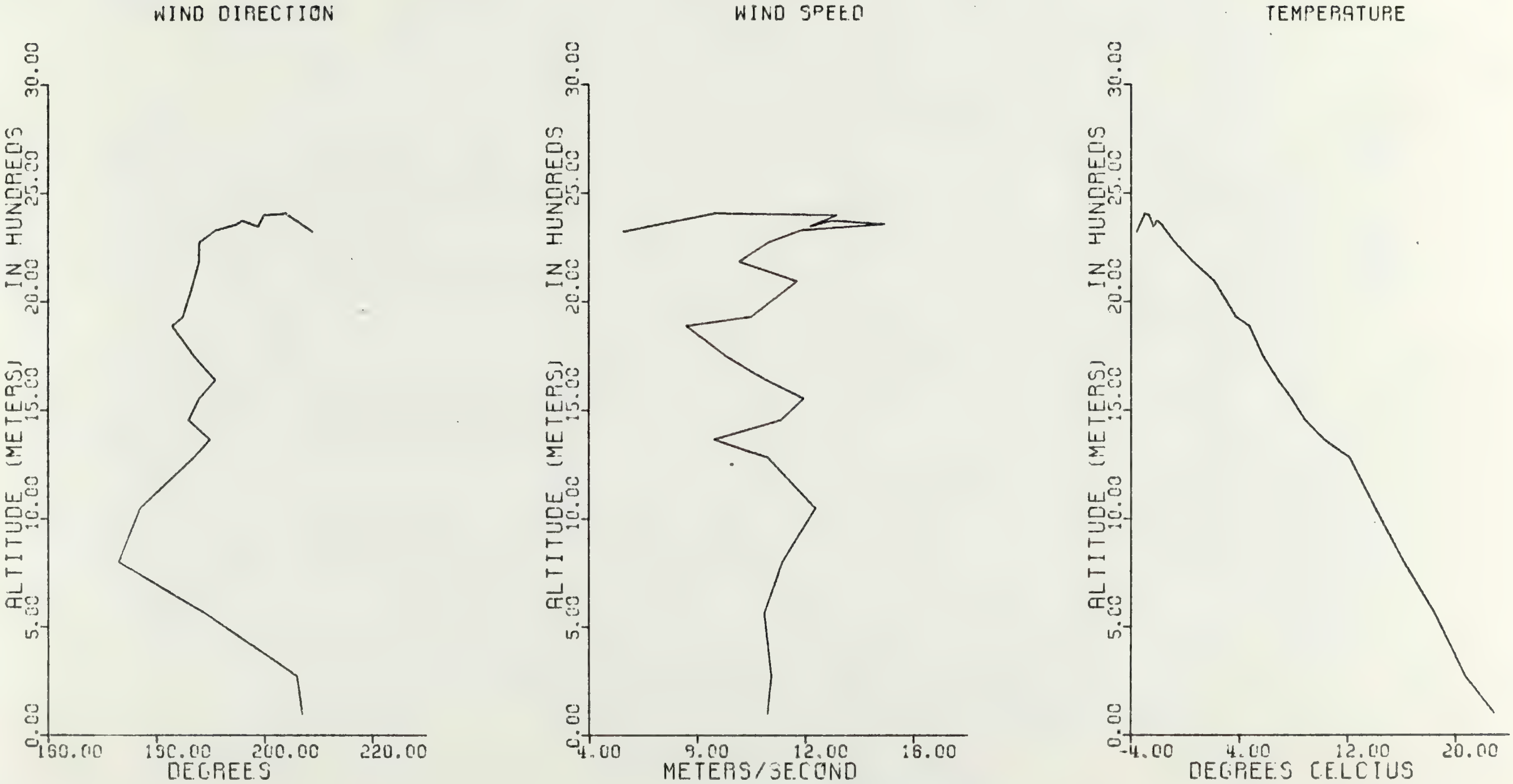

C-B PIBAL SOUNDING

TIME 1300   DATE 6/16/78


WIND DIRECTION

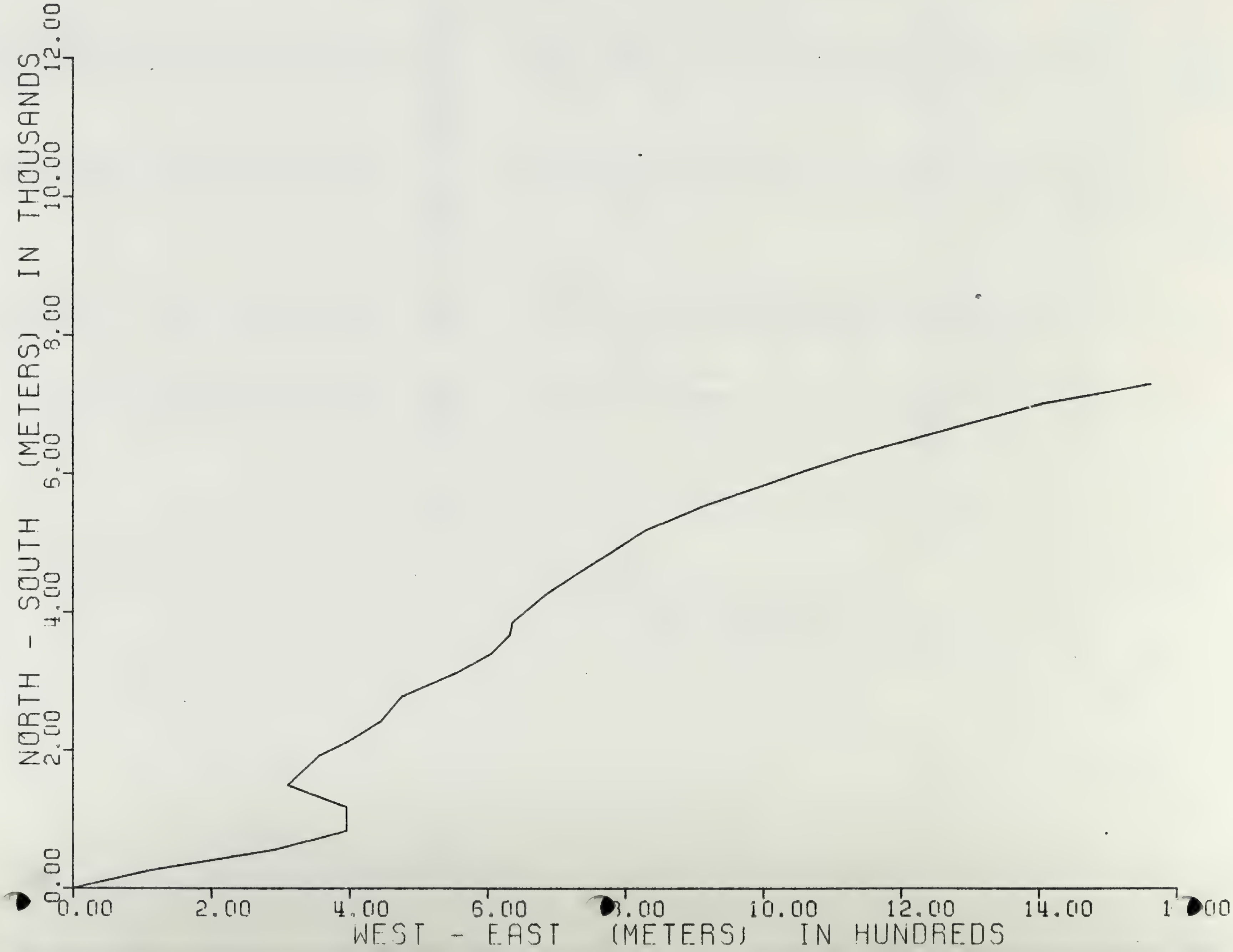
WIND SPEED

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1300 DATE 6/16/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



C-b PIBAL SOUNDING

Time: 0650 Date: 6/19/78

DOUBLE THEODOLITE DATA NOT REDUCED. SITE #2 LOST BALLOON.

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C-B PIBAL SOUNDING

SOUNDING DATE  6-19-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                THEODOLITE #1            THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0          59.5       -0.0          0.0
   0.5         101.5       12.2          66.7        2.2         25.7
   1.0         103.1       19.2          71.5        4.5         24.3
   1.5         102.1       20.0          74.5        7.3         23.0
   2.0          99.8       19.8          76.2        7.2         22.2
   2.5          97.4       18.1          77.8        7.2         21.3
   3.0          95.4       18.1          78.4        8.2         20.5
   3.5          95.4       19.8          79.9        9.7         19.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       82.5        6.7
     2       77.1        8.1
     3       10.7        9.8
     4      165.3       11.0
     5      257.7       12.7
     6      247.4       14.3
     7      330.3       15.9


         HEIGHT  DIRECTION   SPEED  TEMP
          FEET    DEGREES   FT/SEC DEG C

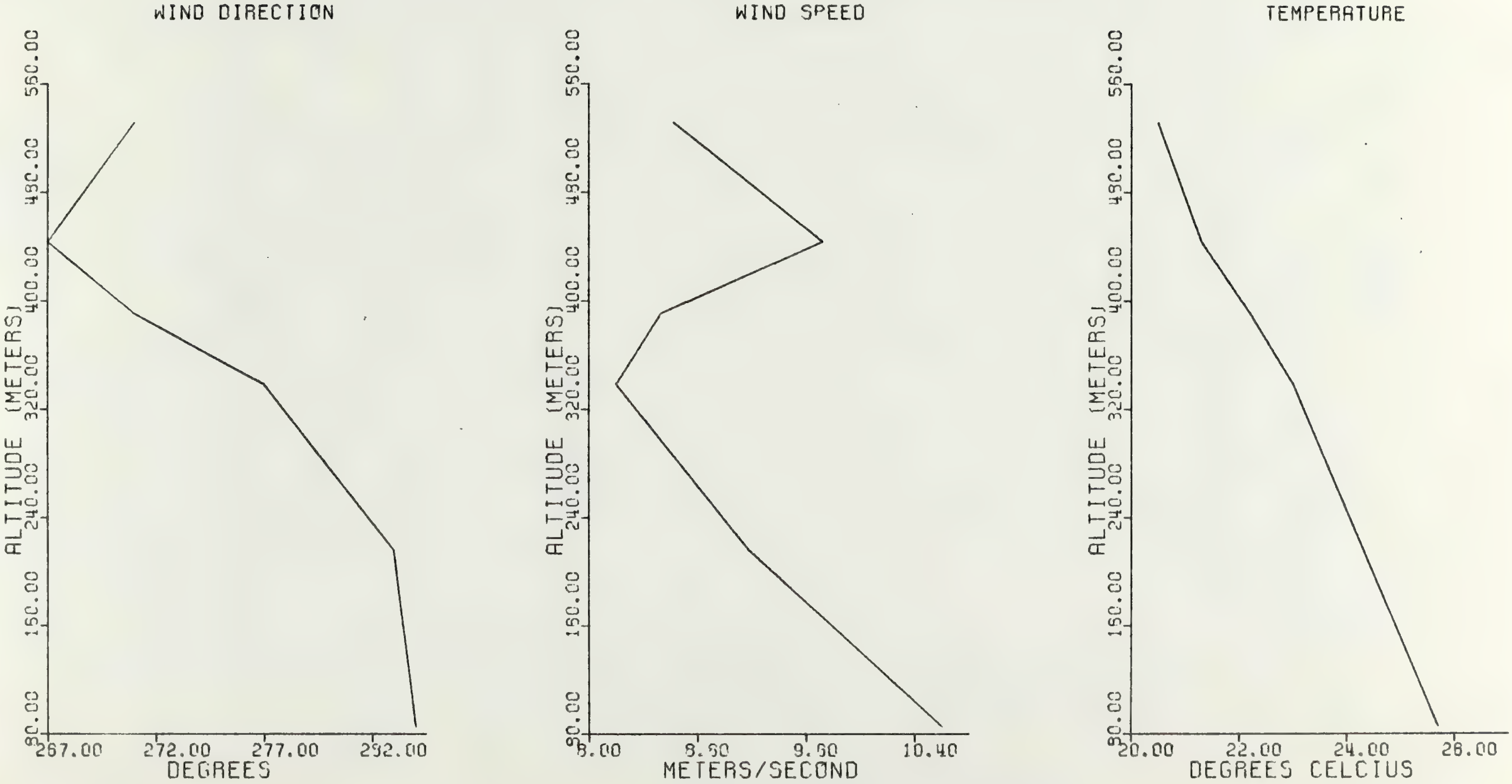
          280.     284.       34.8  25.7
          710.     283.       30.1  24.3
         1110.     277.       26.9  23.0
         1282.     271.       28.0  22.2
         1455.     267.       31.9  21.3
         1743.     271.       28.3  20.5


         HEIGHT  DIRECTION   SPEED  TEMP
         METERS   DEGREES    M/SEC  DEG C

           85.     284.       10.6  25.7
          216.     283.        9.2  24.3
          338.     277.        8.2  23.0
          391.     271.        8.5  22.2
          444.     267.        9.7  21.3
          531.     271.        8.6  20.5
```

C-B PIBAL SOUNDING

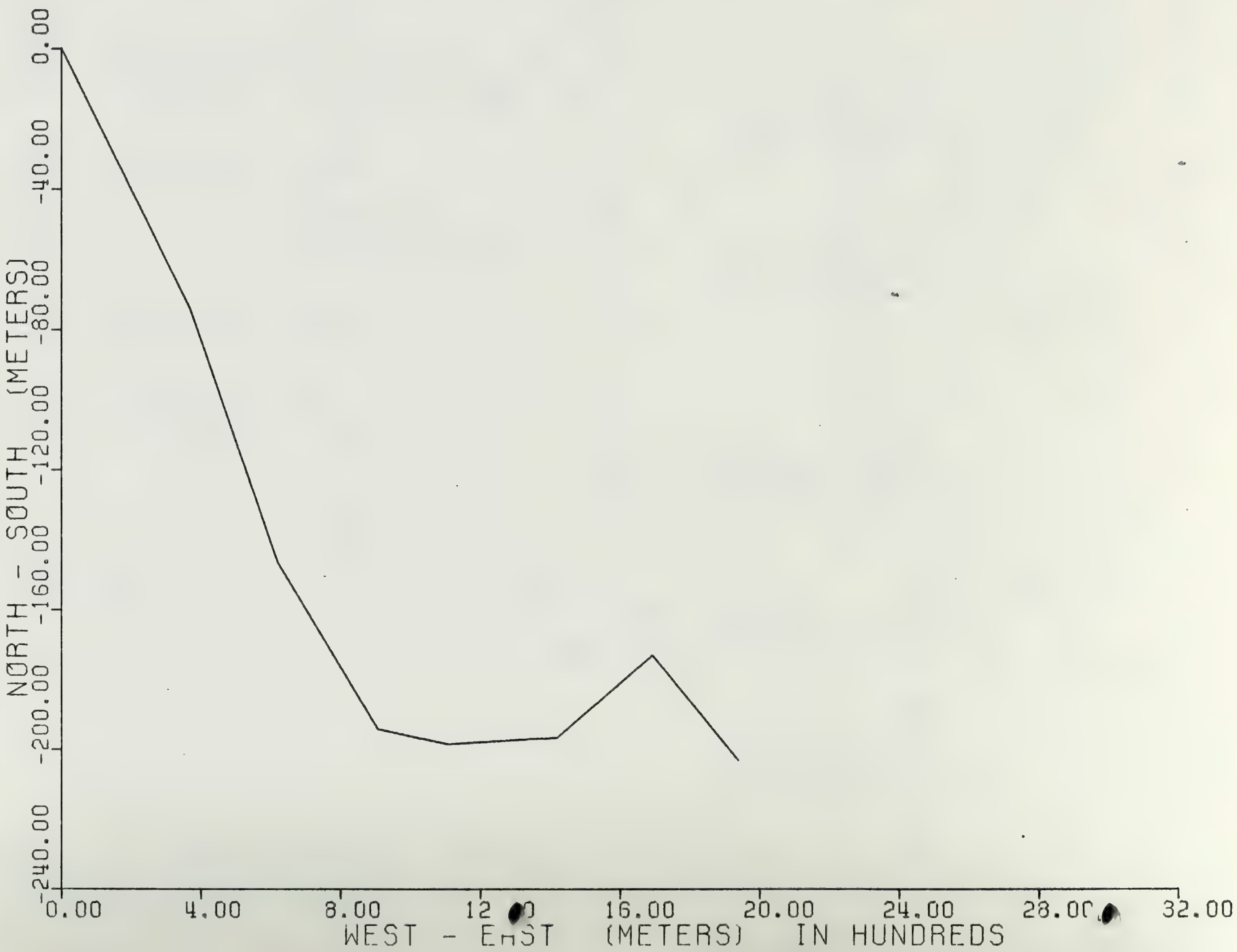
TIME 1330 DATE 6/19/78



C-B PIBAL SOUNDING

TIME 1330   DATE 6/19/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



C-b PIBAL SOUNDING

Time: 0650 Date: 6/21/78

DOUBLE THEODOLITE DATA NOT REDUCED. SITE #1 LOST BALLOON IN SUN.

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C-B PIBAL SOUNDING

SOUNDING DATE  6-21-78                              ** SUSPECT DATA **

BALLOON RELEASED 1335 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                  THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0           59.5       -0.0         0.0
   0.5         333.4       24.9           54.2        2.8        19.3
   1.0         332.1       18.9           45.5        5.5        20.9
   1.5         335.1       17.2           38.3        7.6        20.9
   2.0         337.5       18.3           28.0       11.9        20.9
   2.5         341.1       20.8           25.3       13.9        20.8
   3.0         344.3       22.4           22.7       16.2        20.8
   3.5         347.4       26.5           21.5       19.6        20.8
   4.0         350.0       29.8           20.3       22.5        20.4
   4.5         352.1       32.0           20.3       25.0        19.6
   5.0         354.9       34.2           20.4       27.2        18.8
   5.5         355.2       36.4           20.1       29.4        18.1
   6.0         356.4       37.1           20.0       30.9        17.3
   6.5         357.1       38.1           19.9       32.1        16.5
   7.0         358.9       38.9           19.9       32.6        15.7
   7.5           0.1       39.4           19.8       33.5        14.9
   8.0           1.8       39.5           20.2       33.8        14.2
   8.5           4.1       39.3           21.3       33.6        13.4
   9.0           7.9       39.3           23.0       33.6        12.6
   9.5          10.1       39.2           25.0       33.4        11.8
  10.0          12.6       38.6           26.7       32.9        11.1
  10.5          15.9       38.1           28.4       32.2        10.3
  11.0          18.1       37.1           30.0       31.3         9.6
  11.5          21.7       35.4           32.1       30.3         8.9
  12.0          24.3       34.2           33.7       29.1         8.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      120.2        5.3
     2      166.2        6.3
     3      216.6        7.4
     4      334.5        9.7
     5      303.6       11.1
     6      366.6       12.8
     7      364.2       14.6
     8      326.5       16.7
     9      426.3       18.2
    10      446.2       20.2
    11      483.4       21.3
    12      637.9       22.7
    13      684.3       23.8
    14      565.5       25.7
    15      617.5       27.5
```

```
16      633.7       29.1
17      626.8       30.4
18      583.3       33.1
19      662.3       32.6
20      715.8       33.2
21      588.3       35.1
22      625.6       35.2
23      749.3       37.8
24      668.1       38.9


   HEIGHT  DIRECTION  SPEED  TEMP
    FEET    DEGREES   FT/SEC DEG C

     270.     153.      23.5  19.3
     520.     156.      28.2  20.9
     758.     161.      39.0  20.9
    1364.     168.      37.2  20.9
    1814.     180.      28.1  20.8
    2358.     183.      29.2  20.8
    3210.     188.      29.0  20.8
    4148.     191.      25.2  20.4
    4903.     199.      24.3  19.6
    5848.     197.      18.8  18.8
    6559.     191.      14.5  18.1
    7234.     195.      16.2  17.3
    7804.     199.      19.5  16.5
    8545.     199.      25.8  15.7
    9319.     202.      25.3  14.9
    9929.     215.      24.6  14.2
   10298.     222.      36.3  13.4
   11238.     243.      27.0  12.6
   11020.     279.      18.7  11.8
   11059.     241.      30.9  11.1
   11520.     245.      29.0  10.3
   11278.     243.      37.4   9.6
   11686.     239.      45.7   8.9


   HEIGHT  DIRECTION  SPEED  TEMP
   METERS   DEGREES   M/SEC  DEG C

      82.     153.       7.2  19.3
     159.     156.       8.6  20.9
     231.     161.      11.9  20.9
     416.     168.      11.3  20.9
     553.     180.       8.6  20.8
     719.     183.       8.9  20.8
     978.     188.       8.8  20.8
    1264.     191.       7.7  20.4
    1494.     199.       7.4  19.6
    1782.     197.       5.7  18.8
    1999.     191.       4.4  18.1
    2205.     195.       4.9  17.3
    2379.     199.       5.9  16.5
    2604.     199.       7.9  15.7
    2841.     202.       7.7  14.9
    3026.     215.       7.5  14.2
    3139.     222.      11.1  13.4
    3425.     243.       8.2  12.6
    3359.     279.       5.7  11.8
    3371.     241.       9.4  11.1
    3511.     245.       8.8  10.3
    3438.     243.      11.4   9.6
    3562.     239.      13.9   8.9
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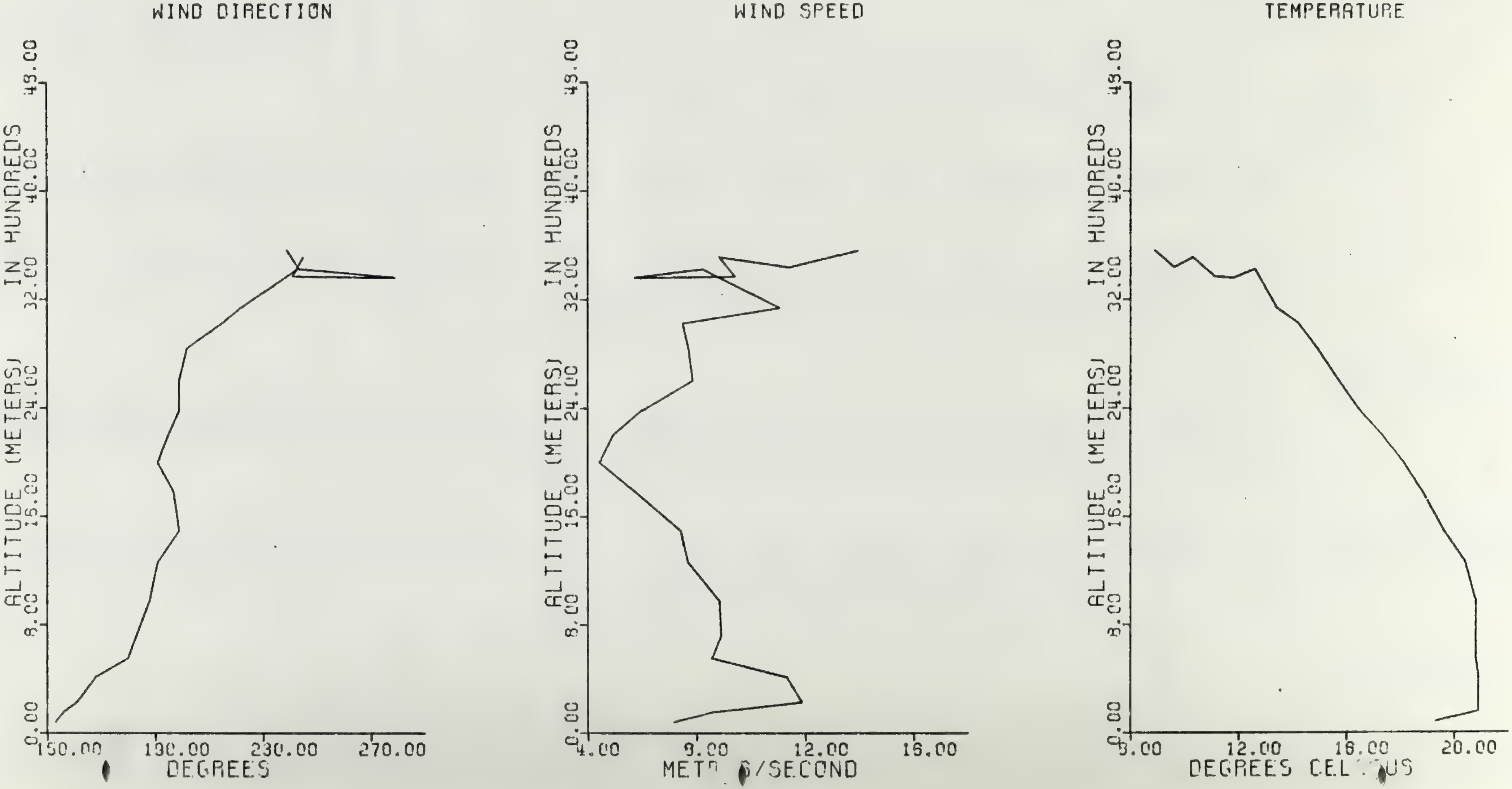
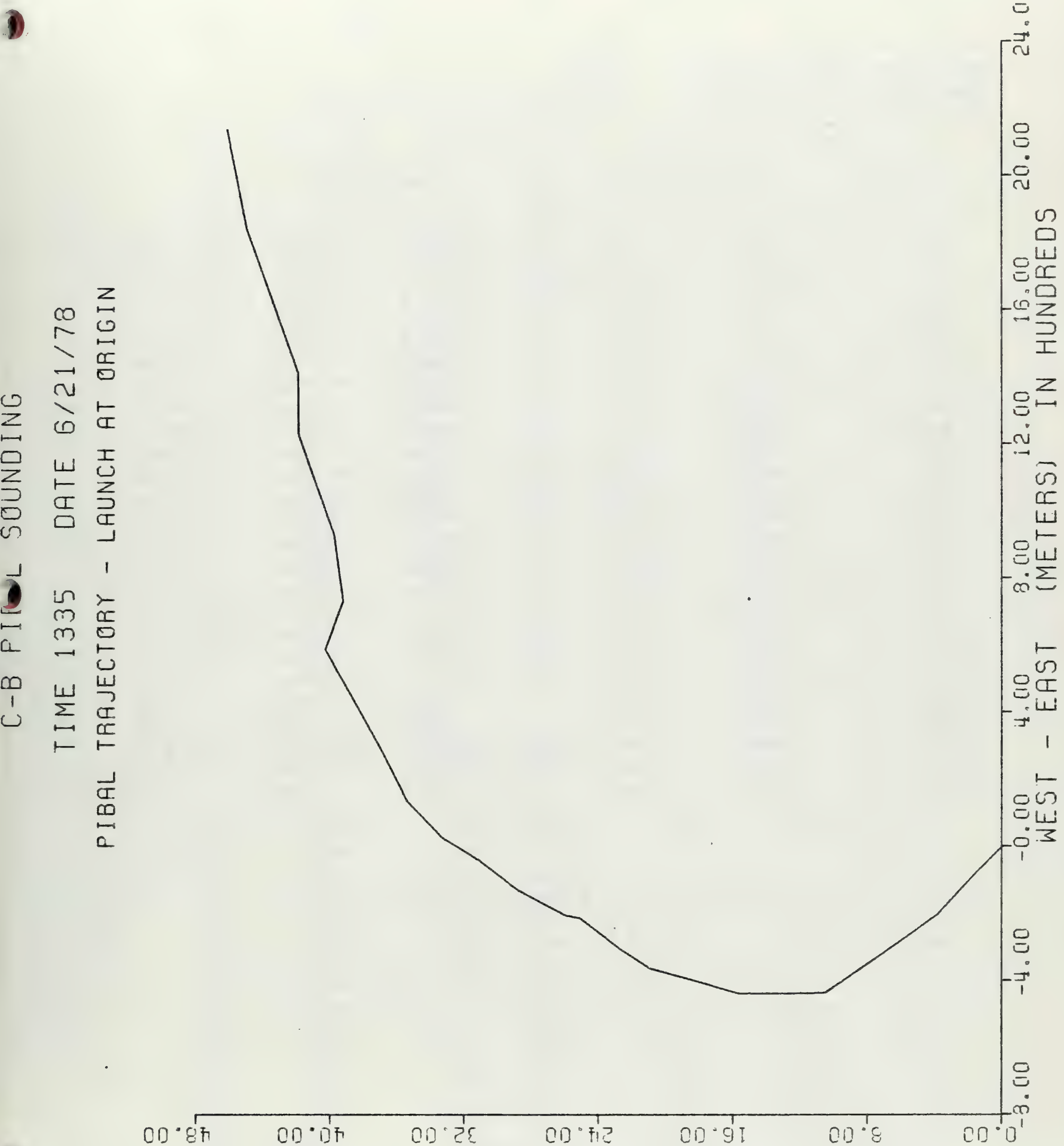
C-B PIBAL SOUNDING

TIME 1335 DATE 6/21/78




C-B PIBAL SOUNDING
TIME 1335 DATE 6/21/78
PIBAL TRAJECTORY - LAUNCH AT ORIGIN
-8.00
-4.00
-0.00
4.00
8.00
12.00
16.00
20.00
24.00
WEST - EAST (METERS) IN HUNDREDS
0.00
8.00
16.00
24.00
32.00
40.00
48.00
NORTH - SOUTH (METERS) IN HUNDREDS

```
C-B PIBAL SOUNDING

SOUNDING DATE  6-23-76

BALLOON RELEASED  700 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                   THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0            0.0        0.0            59.5       -0.0        0.0
   0.5          289.1       47.1            56.8        3.5       18.5
   1.0          348.0       35.2            50.8        6.0       18.2
   1.5            1.1       25.1            45.8        7.9       17.8
   2.0            5.2       21.3            42.3        9.1       17.3
   2.5           13.4       17.1            39.7        9.5       16.8
   3.0           17.2       17.1            40.2        9.9       16.3
   3.5           22.8       17.1            40.9       10.7       15.8
   4.0           27.2       17.0            42.3       11.3       15.3
   4.5           30.9       17.0            43.6       11.7       14.8
   5.0           34.3       17.3            44.8       12.1       14.3
   5.5           36.2       17.5            45.9       12.6       13.8
   6.0           38.3       17.9            47.3       13.0       13.3
   6.5           40.8       18.0            48.3       13.3       12.8
   7.0           42.4       18.2            49.6       13.7       12.3
   7.5           44.1       18.5            50.4       14.0       11.8
   8.0           45.6       18.7            51.1       14.1       11.3
   8.5           46.7       18.7            51.7       14.2       10.7
   9.0           47.6       18.3            52.3       14.2       10.1
   9.5           48.1       17.9            52.5       14.0        9.7
  10.0           48.5       17.4            52.6       14.0        9.3
  10.5           48.7       16.9            52.6       13.8        8.9
  11.0           48.9       16.7            52.7       13.7        8.5
  11.5           49.0       16.4            52.8       13.7        8.1
  12.0           49.1       16.2            52.9       13.6        7.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       41.6        5.0
     2       45.8        6.1
     3      137.0        7.7
     4      211.4        9.1
     5      279.7       11.9
     6      294.8       12.9
     7      326.5       15.0
     8      398.0       16.5
     9      426.3       18.1
    10      399.6       20.0
    11      478.6       20.7
    12      527.0       21.0
    13      505.8       23.2
    14      609.1       23.1
  16     518.0      26.3
  17     510.5      27.5
  18     575.6      28.5
  19     566.4      29.6
  20     622.2      31.7
  21     639.7      33.0
  22     644.5      33.5
  23     720.0      33.7
  24     742.6      33.5


      HEIGHT   DIRECTION   SPEED  TEMP
       FEET     DEGREES   FT/SEC DEG C

        396.     169.      15.8  18.5
        679.     192.      30.5  18.2
        927.     194.      31.5  17.8
       1146.     203.      41.7  17.3
       1427.     212.      36.4  16.8
       1586.     226.      30.1  16.3
       1943.     230.      35.7  15.8
       2200.     238.      31.1  15.3
       2461.     238.      34.5  14.8
       2813.     243.      26.0  14.3
       2981.     273.      12.9  13.8
       3097.     250.      25.2  13.3
       3494.     253.      21.8  12.8
       3539.     261.      17.0  12.3
       3383.     243.      30.5  11.8
       4175.     245.      25.9  11.3
       4383.     247.      21.3  10.7
       4499.     243.      20.2  10.1
       4588.     235.      29.8   9.7
       4851.     233.      32.5   9.3
       4955.     234.      17.7   8.9
       4983.     241.       7.2   8.5
       4971.     292.       1.2   8.1

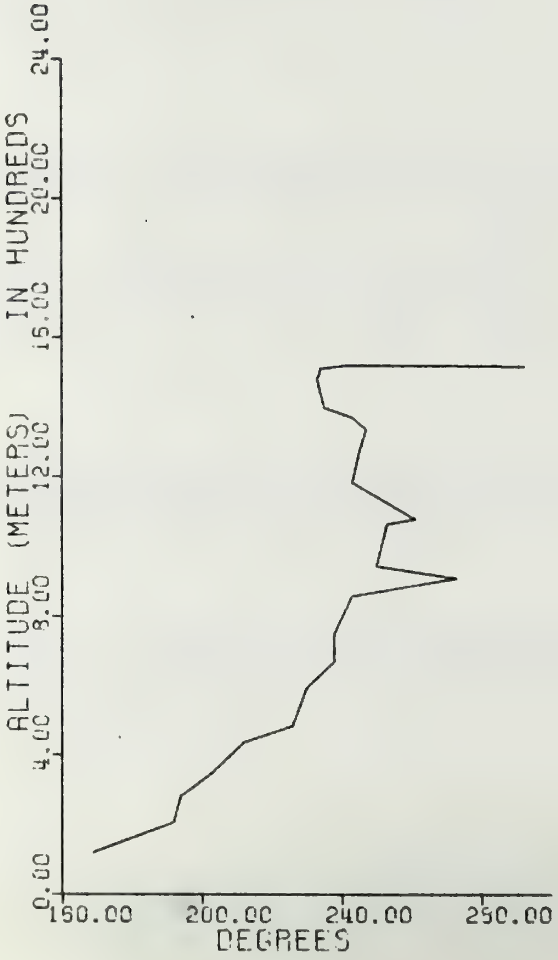

      HEIGHT   DIRECTION   SPEED  TEMP
      METERS    DEGREES    M/SEC  DEG C

        121.     169.       4.8  18.5
        207.     192.       9.3  18.2
        283.     194.       9.6  17.8
        349.     203.      12.7  17.3
        435.     212.      11.1  16.8
        484.     226.       9.2  16.3
        592.     230.      10.9  15.8
        671.     238.       9.5  15.3
        750.     238.      10.5  14.8
        857.     243.       7.9  14.3
        909.     273.       3.9  13.8
        944.     250.       7.7  13.3
       1065.     253.       6.6  12.8
       1079.     261.       5.2  12.3
       1184.     243.       9.3  11.8
       1273.     245.       7.9  11.3
       1336.     247.       6.5  10.7
       1371.     243.       6.2  10.1
       1398.     235.       9.1   9.7
       1479.     233.       9.9   9.3
       1510.     234.       5.4   8.9
       1519.     241.       2.2   8.5
       1515.     292.       0.4   8.1
```

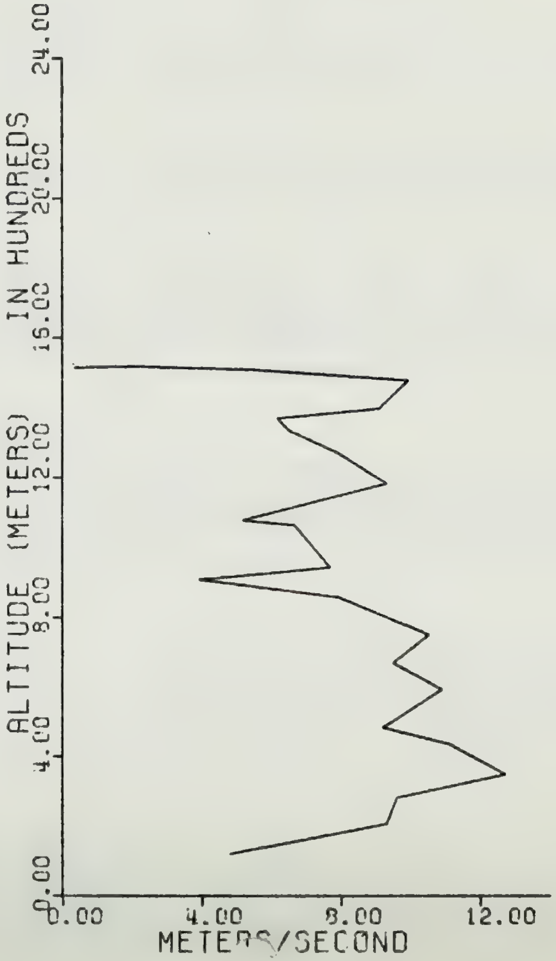
C-B PIBAL SOUNDING

TIME 700 DATE 6/23/78

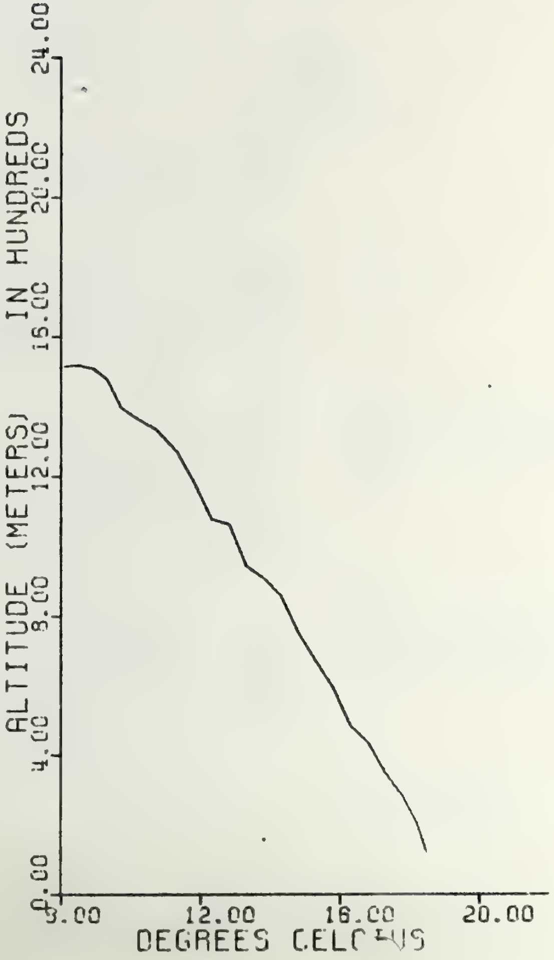
WIND DIRECTION



WIND SPEED



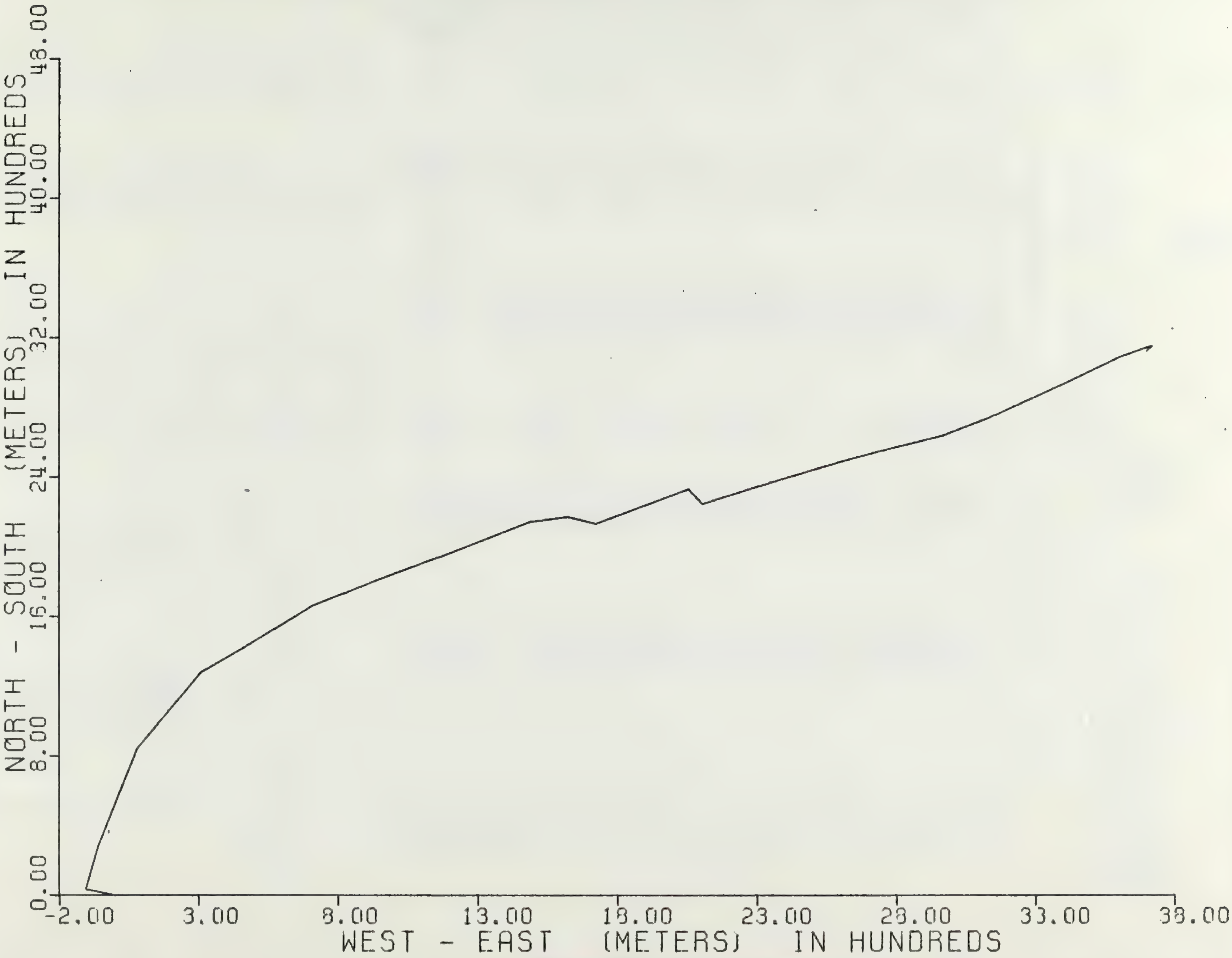
TEMPERATURE



C-B PIBAL SOUNDING

TIME 700 DATE 6/23/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-23-78

BALLOON RELEASED 1400 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0             59.5       -0.0        0.0
   0.5          19.9       10.8             56.1        1.2       27.6
   1.0          19.9       10.9             53.5        2.1       27.2
   1.5          19.5       11.1             51.6        3.2       26.8
   2.0          21.2       11.4             50.1        3.7       26.4
   2.5          21.2       12.0             48.3        4.7       26.0
   3.0          22.1       12.9             46.9        5.7       25.3
   3.5          22.0       14.1             45.5        6.7       23.2
   4.0          21.0       14.9             43.2        8.2       24.0
   4.5          18.5       17.1             40.3       10.7       23.7
   5.0          17.1       19.3             38.5       12.3       22.5
   5.5          16.1       20.0             36.9       13.3       21.4
   6.0          15.0       21.0             35.4       14.3       20.1
   6.5          14.2       21.0             33.2       15.2       18.8
   7.0          12.4       21.7             32.0       15.9       17.8
   7.5          11.5       21.9             30.5       16.5       17.0
   8.0          11.1       21.9             29.4       17.0       16.3
   8.5          11.0       21.9             27.8       17.7       15.1
   9.0          11.0       21.8             27.5       17.9       13.5
   9.5          11.0       22.0             26.8       18.2       13.0
  10.0          11.9       21.9             27.0       18.2       12.5
  10.5          13.1       21.0             27.1       18.2       11.8
  11.0          13.5       20.1             26.8       18.0       10.9
  11.5          14.1       20.0             26.6       17.5       10.1
  12.0          14.4       19.1             26.5       17.5        9.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      113.9        5.7
     2      126.4        6.5
     3      184.3        7.1
     4      172.3        7.9
     5      205.1        8.7
     6      225.0        9.7
     7      230.3       10.6
     8      295.3       11.9
     9      401.6       13.5
    10      381.9       14.5
    11      402.8       15.5
    12      396.5       16.4
    13      437.2       18.4
    14      453.6       18.5
    15      469.8       19.6
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 16       513.3        20.8
 17       564.4        23.1
 18       612.4        23.6
 19       597.3        24.9
 20       597.5        25.7
 21       761.3        27.4
 22       884.8        28.6
 23       714.7        30.2
 24       939.2        30.9


      HEIGHT  DIRECTION   SPEED  TEMP
       FEET    DEGREES   FT/SEC DEG C

        125.     200.      18.1  27.6
        228.     199.      14.9  27.2
        327.     203.      14.1  26.8
        426.     204.      15.8  26.4
        569.     204.      17.5  26.0
        743.     204.      17.3  25.3
        940.     198.      21.5  23.2
       1230.     191.      27.9  24.0
       1719.     186.      24.1  23.7
       2127.     185.      19.0  22.5
       2425.     184.      18.1  21.4
       2741.     186.      26.3  20.1
       3174.     178.      19.9  18.8
       3325.     165.      13.3  17.8
       3618.     183.      20.9  17.0
       3889.     188.      31.2  16.3
       4422.     190.      25.6  15.1
       4538.     191.      15.7  13.5
       4844.     200.      18.9  13.0
       5006.     210.      23.9  12.5
       5218.     204.      27.5  11.8
       5309.     201.      27.4  10.9
       5538.     203.      22.6  10.1


      HEIGHT  DIRECTION   SPEED  TEMP
      METERS   DEGREES    M/SEC  DEG C

         38.     200.       5.5  27.6
         69.     199.       4.5  27.2
        100.     203.       4.3  26.8
        130.     204.       4.8  26.4
        173.     204.       5.3  26.0
        227.     204.       5.3  25.3
        286.     198.       6.6  23.2
        375.     191.       8.5  24.0
        524.     186.       7.3  23.7
        648.     185.       5.8  22.5
        739.     184.       5.5  21.4
        835.     186.       8.0  20.1
        968.     178.       6.1  18.8
       1013.     165.       4.1  17.8
       1103.     183.       6.4  17.0
       1185.     188.       9.5  16.3
       1348.     190.       7.8  15.1
       1383.     191.       4.8  13.5
       1476.     200.       5.8  13.0
       1526.     210.       7.3  12.5
       1590.     204.       8.4  11.8
       1618.     201.       8.4  10.9
```
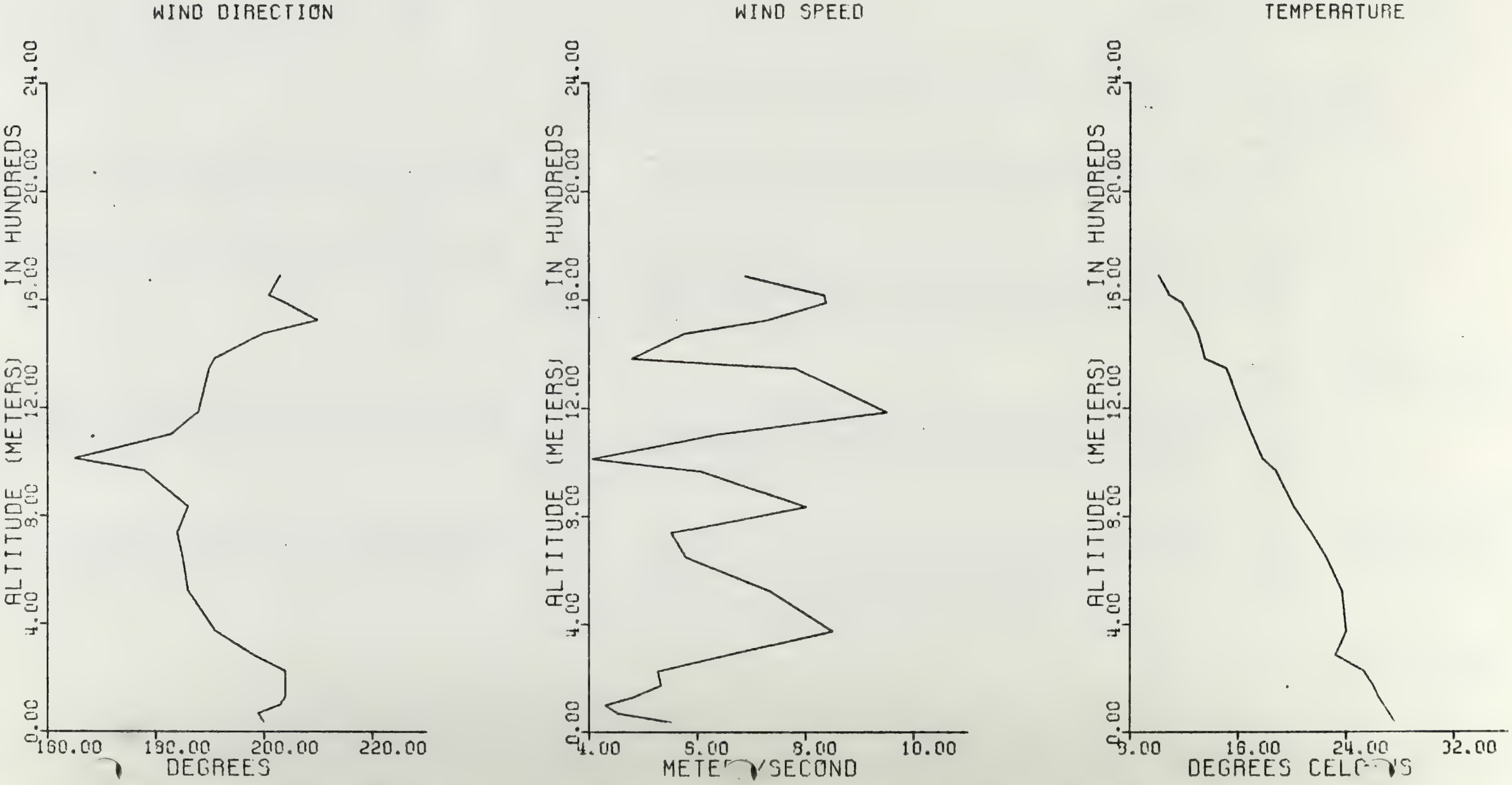

C-B PIBAL SOUNDING

TIME 1400 DATE 6/23/78

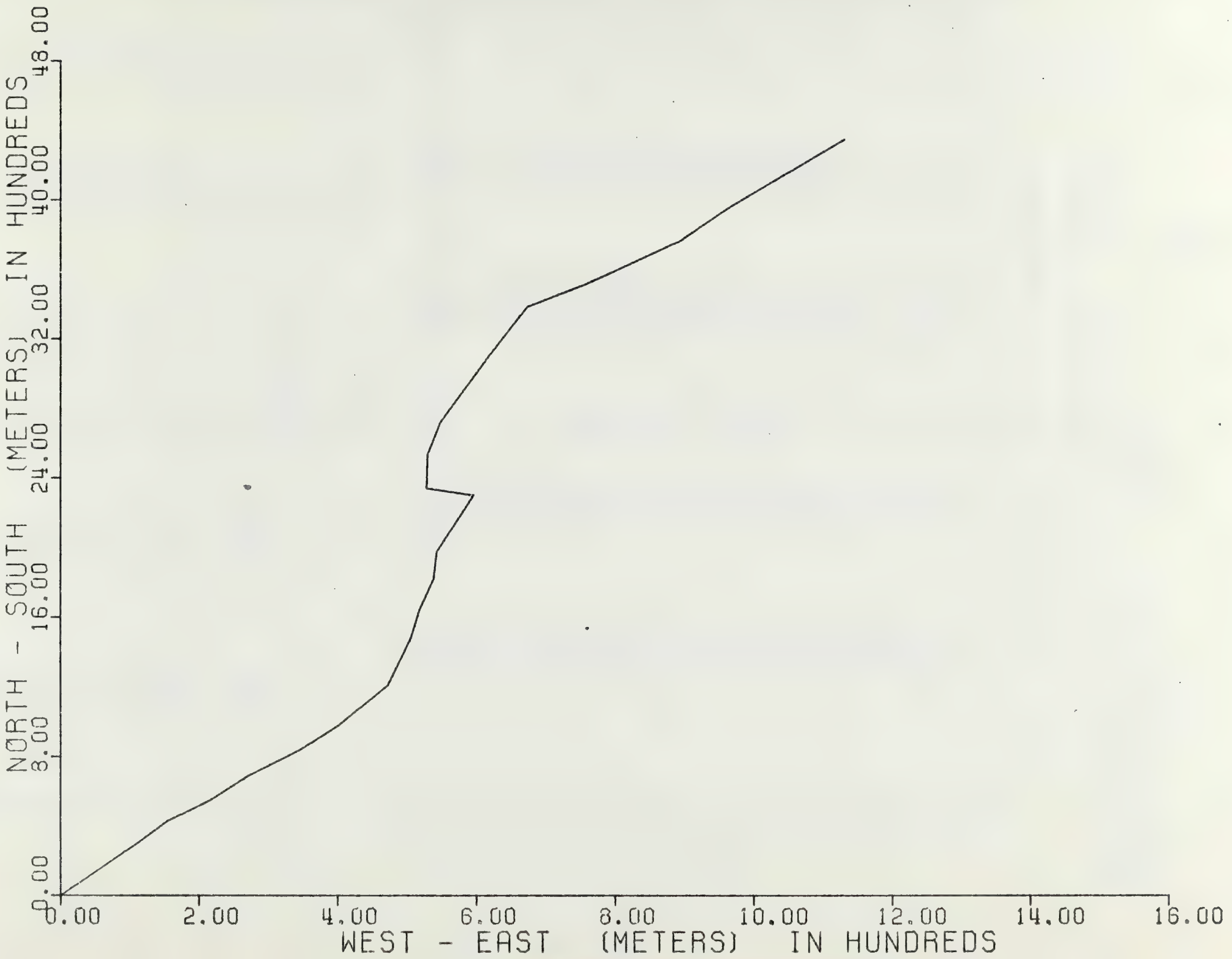


II B-1394

C-B PI[illegible]L SOUNDING

TIME 1400 DATE 6/23/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-26-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                    THEODOLITE #1             THEODOLITE #2

   TIME        AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0             0.0        0.0           59.5       -0.0          0.0
   0.5           261.2       77.3           59.3        2.9         10.3
   1.0           267.2       85.4           59.6        5.4         10.8
   1.5            69.1       79.2           60.0        7.5         11.0
   2.0           123.1       78.2           61.9       10.3         11.3
   2.5           165.0       76.5           63.2       13.2         11.5
   3.0           194.2       73.6           63.9       16.4         11.2
   3.5           205.7       70.0           64.6       19.7         11.0
   4.0           212.3       64.1           65.9       23.4         10.9
   4.5           219.5       62.3           65.9       27.3         11.1
   5.0           226.2       62.2           65.8       30.7         11.4
   5.5           232.0       64.4           63.8       33.3         11.6
   6.0           232.6       67.9           63.5       35.0         11.9
   6.5           217.2       75.1           65.2       35.3         11.7
   7.0           194.2       77.3           72.2       35.3         11.2
   7.5           153.2       76.7           71.5       34.9         10.7
   8.0           125.2       72.3           72.5       33.5         10.2
   8.5           102.0       69.6           71.3       32.9          9.6
   9.0            85.7       66.8           68.7       32.6          8.9
   9.5            71.4       63.2           66.0       32.4          8.2
  10.0            64.6       61.3           63.4       32.2          7.5
  10.5            57.7       57.4           61.1       31.9          6.8
  11.0            53.4       55.7           59.2       31.6          6.1
  11.5            47.6       53.5           56.2       31.8          5.4
  12.0            42.5       51.5           53.7       31.7          4.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       12.2       5.0
     2       32.2       5.3
     3       22.2       5.7
     4       24.4       5.9
     5       31.0       6.0
     6       55.3       6.1
     7       58.6       6.3
     8       46.9       6.4
     9       61.9       6.5
    10      142.6       6.7
    11      132.6       7.0
    12      144.6       7.4
    13      117.8       8.0
    14      503.3       8.5
    15      208.3       9.4
```

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16      163.1       10.3
17      253.0       11.3
18      263.5       12.3
19      367.2       13.4
20      307.6       14.0
21      369.3       15.2
22      374.9       15.7
23      377.6       16.8
24      449.0       17.5


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC DEG C

          370.      83.       0.8  10.3
          608.     253.       4.0  10.8
          836.     298.       4.6  11.0
         1109.       9.       6.3  11.3
         1360.      41.       7.7  11.5
         1612.      50.       8.0  11.2
         1857.      46.       9.6  11.0
         2078.      54.       9.8  10.9
         2328.      74.       7.3  11.1
         2563.     109.       4.7  11.4
         2801.     179.       3.0  11.6
         3048.     257.       8.8  11.9
         3375.     282.      14.2  11.7
         3635.     279.      16.5  11.2
         3950.     263.      20.9  10.7
         4185.     249.      22.2  10.2
         4541.     228.      22.4   9.6
         4845.     216.      24.0   8.9
         5215.     208.      20.6   8.2
         5365.     208.      20.9   7.5
         5724.     206.      20.0   6.8
         5816.     193.      19.0   6.1
         6172.     189.      22.1   5.4


        HEIGHT  DIRECTION   SPEED  TEMP
        METERS   DEGREES    M/SEC  DEG C

          113.      83.       0.2  10.3
          185.     253.       1.2  10.8
          255.     298.       1.4  11.0
          338.       9.       1.9  11.3
          415.      41.       2.3  11.5
          491.      50.       2.4  11.2
          566.      46.       2.9  11.0
          633.      54.       3.0  10.9
          710.      74.       2.2  11.1
          781.     109.       1.4  11.4
          854.     179.       0.9  11.6
          929.     257.       2.7  11.9
         1029.     282.       4.3  11.7
         1108.     279.       5.0  11.2
         1204.     263.       6.4  10.7
         1276.     249.       6.8  10.2
         1384.     228.       6.8   9.6
         1477.     216.       7.3   8.9
         1590.     208.       6.3   8.2
         1635.     208.       6.4   7.5
         1745.     206.       6.1   6.8
         1773.     193.       5.8   6.1
         1881.     189.       6.7   5.4
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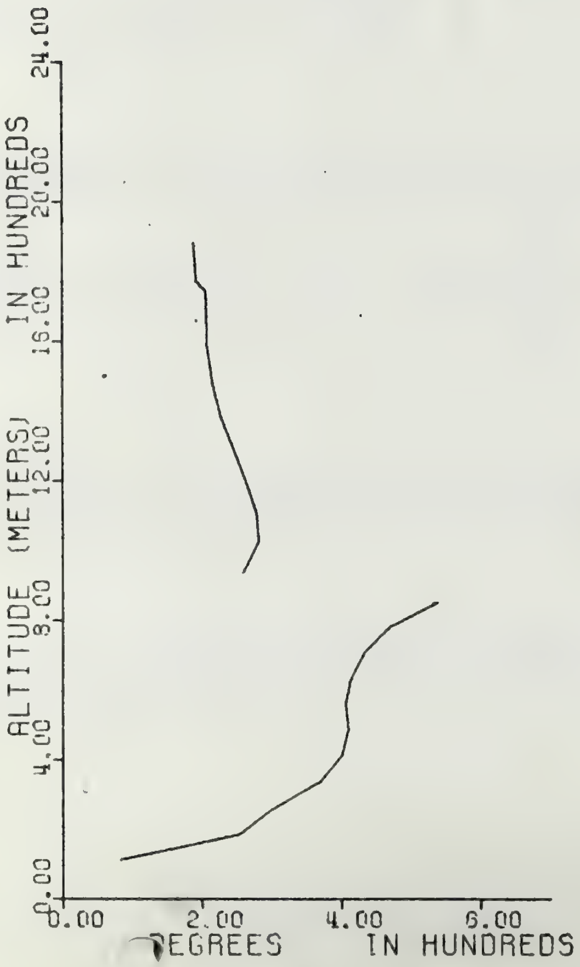
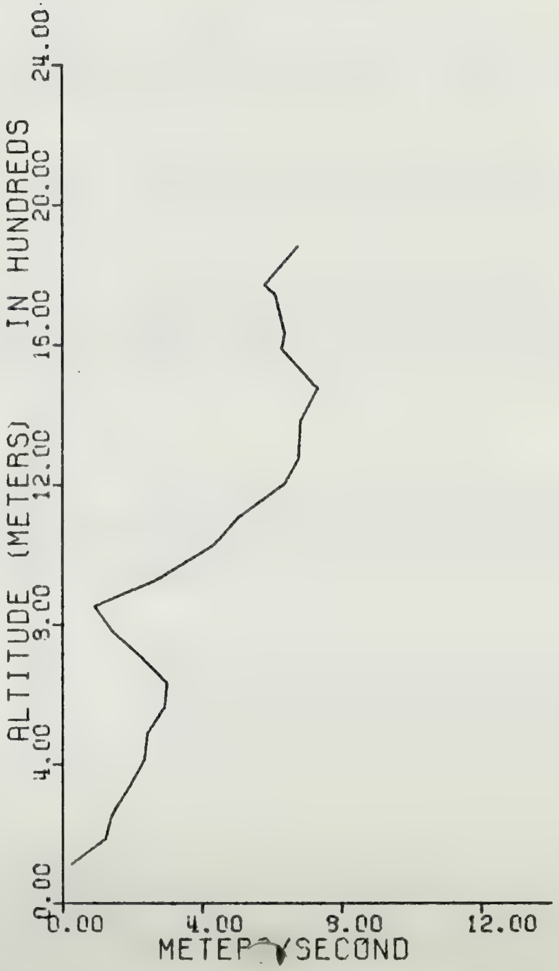
C-B PIBAL SOUNDING

TIME 645 DATE 6/26/78

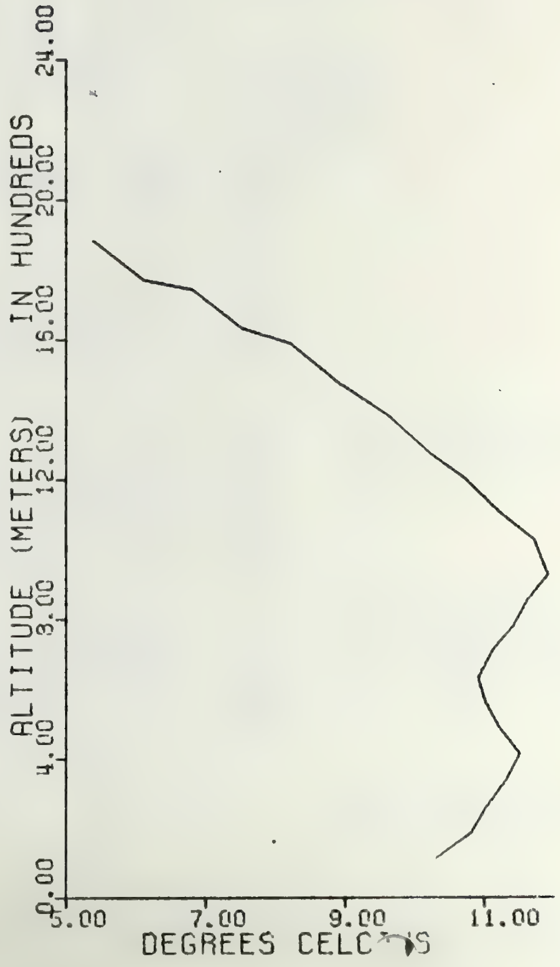
WIND DIRECTION



WIND SPEED



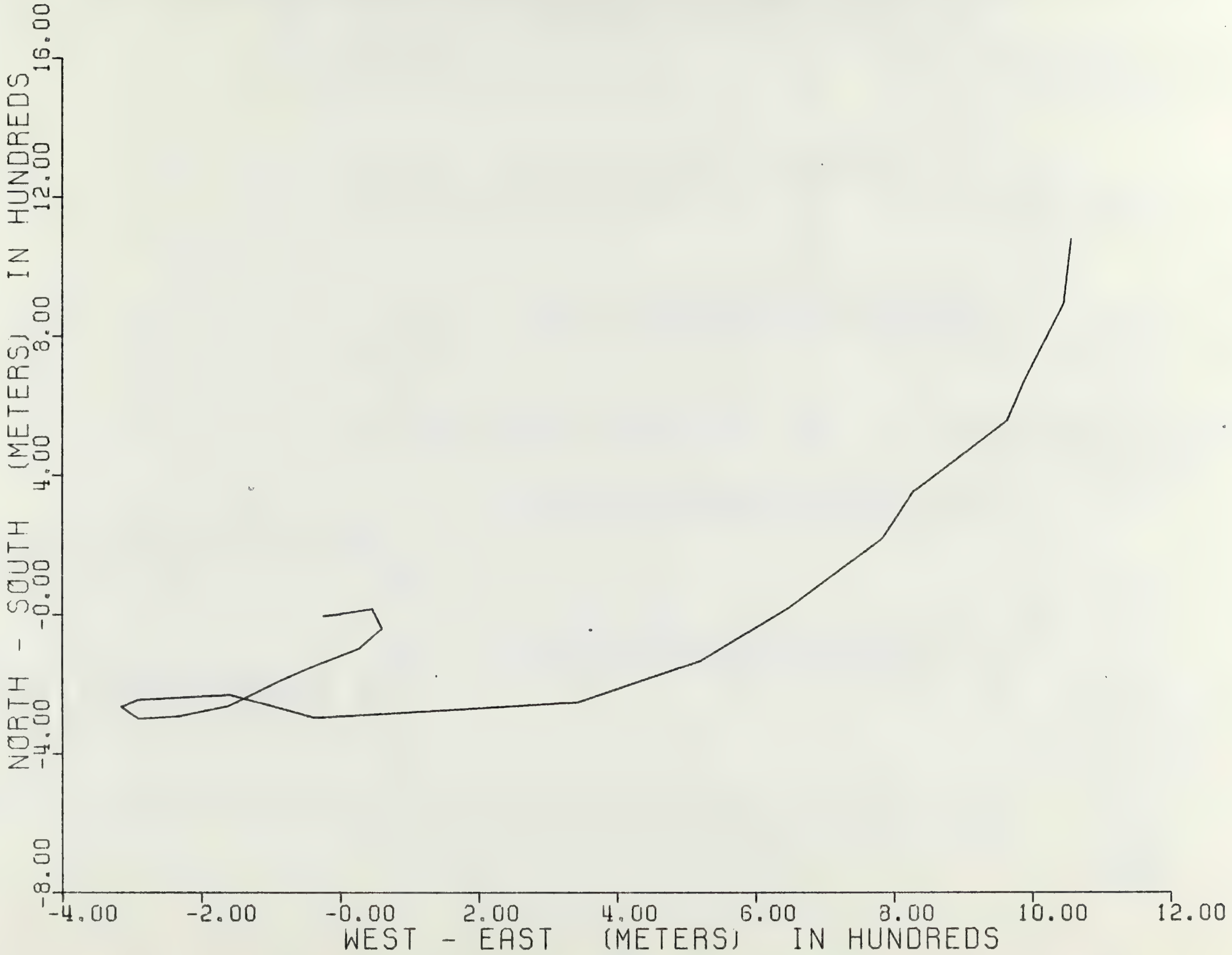
TEMPERATURE



C-B PIBAL SOUNDING

TIME 645   DATE 6/26/78

PIBAL TRAJECTORY - LAUNCH AT ØRIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-26-78

BALLOON RELEASED 1350 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                    THEODOLITE #1              THEODOLITE #2

   TIME        AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0             0.0        0.0           59.5       -0.0        0.0
   0.5           347.3       33.4           53.7       13.5       25.1
   1.0           351.3       39.0           49.0       11.1       23.4
   1.5           355.8       40.3           43.6       11.4       22.5
   2.0           358.1       36.5           39.9       18.3       20.7
   2.5           358.1       32.8           34.6       19.3       19.0
   3.0           357.1       30.2           31.2       20.6       17.7
   3.5           357.1       28.8           28.3       21.0       17.0
   4.0           357.5       28.4           26.4       21.8       16.0
   4.5           358.1       30.2           25.3       23.6       15.0
   5.0           358.9       32.0           24.4       25.7       14.0
   5.5             0.1       34.2           24.6       29.0       13.0
   6.0             1.9       36.4           24.9       30.2       12.0
   6.5             4.3       38.2           25.9       31.8       10.1
   7.0             7.9       39.1           27.3       32.7        9.0
   7.5             9.8       39.0           28.6       32.7        6.8
   8.0            12.1       39.1           29.8       33.2        5.5
   8.5            15.0       40.1           30.9       33.8        3.7
   9.0            16.9       41.3           32.3       34.9        1.8
   9.5            19.0       42.1           33.4       35.5        0.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      883.9        6.2
     2      244.6        6.9
     3      198.1        7.8
     4      344.2       10.0
     5      417.0       11.9
     6      557.3       13.2
     7      589.9       14.7
     8      653.8       16.0
     9      657.9       17.4
    10      716.6       19.0
    11     1029.8       20.4
    12      876.6       21.8
    13      906.5       23.3
    14      927.4       25.3
    15      998.9       25.6
    16     1121.1       26.7
    17     1003.9       29.0
    18     1067.9       29.7
    19     1025.1       31.2
```
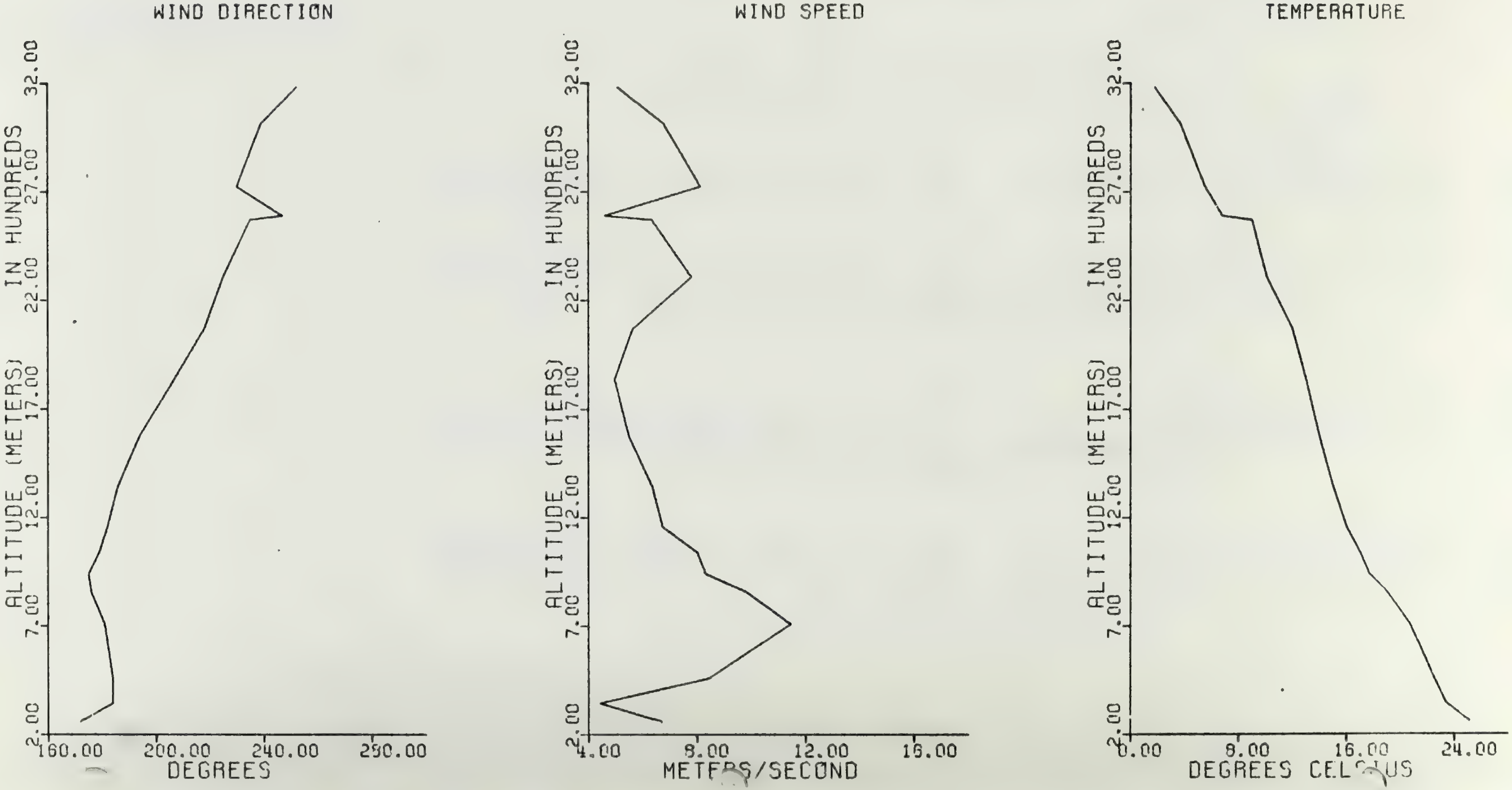

HEIGHT FEET	DIRECTION DEGREES	SPEED- FT/SEC	TEMP DEG C
856.	172.	22.0	25.1
1137.	184.	14.5	23.4
1509.	184.	27.7	22.5
2329.	181.	37.6	20.7
2821.	176.	32.2	19.0
3091.	175.	27.3	17.7
3418.	179.	26.3	17.0
3800.	182.	22.1	16.0
4421.	186.	20.8	15.0
5170.	194.	18.0	14.0
6039.	207.	16.3	13.0
6790.	218.	18.5	12.0
7571.	225.	25.6	10.1
8436.	235.	20.8	9.0
8503.	247.	15.1	6.8
8941.	230.	26.7	5.5
9895.	239.	22.2	3.7
10434.	252.	16.7	1.8

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
261.	172.	6.7	25.1
347.	184.	4.4	23.4
460.	184.	8.4	22.5
710.	181.	11.5	20.7
860.	176.	9.8	19.0
942.	175.	8.3	17.7
1042.	179.	8.0	17.0
1158.	182.	6.7	16.0
1348.	186.	6.3	15.0
1576.	194.	5.5	14.0
1841.	207.	5.0	13.0
2070.	218.	5.6	12.0
2308.	225.	7.8	10.1
2571.	235.	6.3	9.0
2592.	247.	4.6	6.8
2725.	230.	8.1	5.5
3016.	239.	6.8	3.7
3180.	252.	5.1	1.8

C-B PIBAL SOUNDING

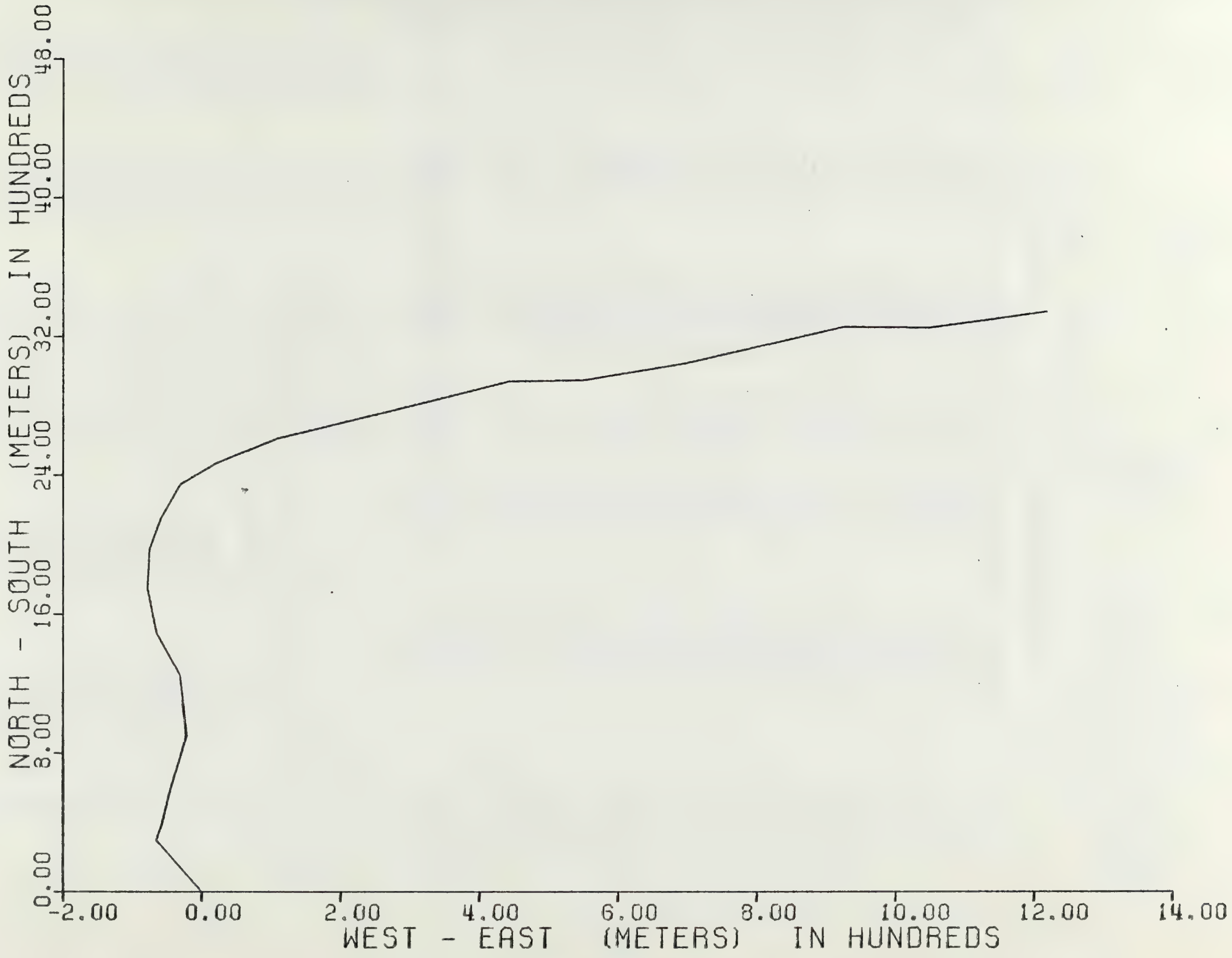
TIME 1350 DATE 6/26/78



C-B PIBAL SOUNDING

TIME 1350   DATE 6/26/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-27-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION      AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0         59.5       -0.0        0.0
   0.5          334.2       16.6         49.4        3.2       21.1
   1.0          338.0       12.8         38.6        5.4       21.2
   1.5          339.4       10.4         29.7        6.9       20.5
   2.0          341.1        9.9         23.3        8.1       19.9
   2.5          343.4       10.9         19.2        9.7       19.2
   3.0          346.2       11.2         17.0       10.3       18.6
   3.5          349.3       11.2         16.3       10.7       17.9
   4.0          352.5       11.4         16.1       11.0       17.3
   4.5          354.5       11.6         15.8       11.3       16.6
   5.0          356.9       11.7         16.1       11.6       15.9
   5.5          358.8       11.7         16.2       11.7       15.1
   6.0            0.2       11.7         16.3       11.9       14.2
   6.5            1.9       11.8         16.9       11.9       13.4
   7.0            3.7       11.8         17.3       12.1       12.6
   7.5            5.2       11.7         17.8       12.2       11.7
   8.0            6.3       11.6         18.1       12.0       10.9
   8.5            7.4       11.4         18.3       11.8       10.1
   9.0            8.2       11.1         18.5       11.7        9.2
   9.5            8.9       11.0         18.5       11.7        8.4
  10.0            9.5       10.9         18.6       11.6        7.6
  10.5            9.8       10.8         18.4       11.5        6.8
  11.0           10.0       10.7         18.3       11.5        5.9
  11.5           10.1       10.6         18.0       11.5        5.1
  12.0           10.1       10.6         17.8       11.7        4.2


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      114.3        5.8
     2      173.0        7.4
     3      292.6        9.3
     4      387.6       11.2
     5      475.0       13.4
     6      516.9       15.4
     7      593.1       17.3
     8      634.5       19.4
     9      672.6       21.3
    10      743.2       23.2
    11      782.9       25.2
    12      852.8       26.9
    13      846.9       28.4
    14      932.2       30.7
    15     1017.0       32.4
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16      992.0        34.3
17      997.6        36.7
18     1074.9        38.2
19     1131.6        40.5
20     1143.1        42.4
21     1153.8        44.7
22     1207.9        46.0
23     1270.2        48.0
24     1384.4        48.7


         HEIGHT   DIRECTION   SPEED   TEMP
          FEET     DEGREES    FT/SEC  DEG C

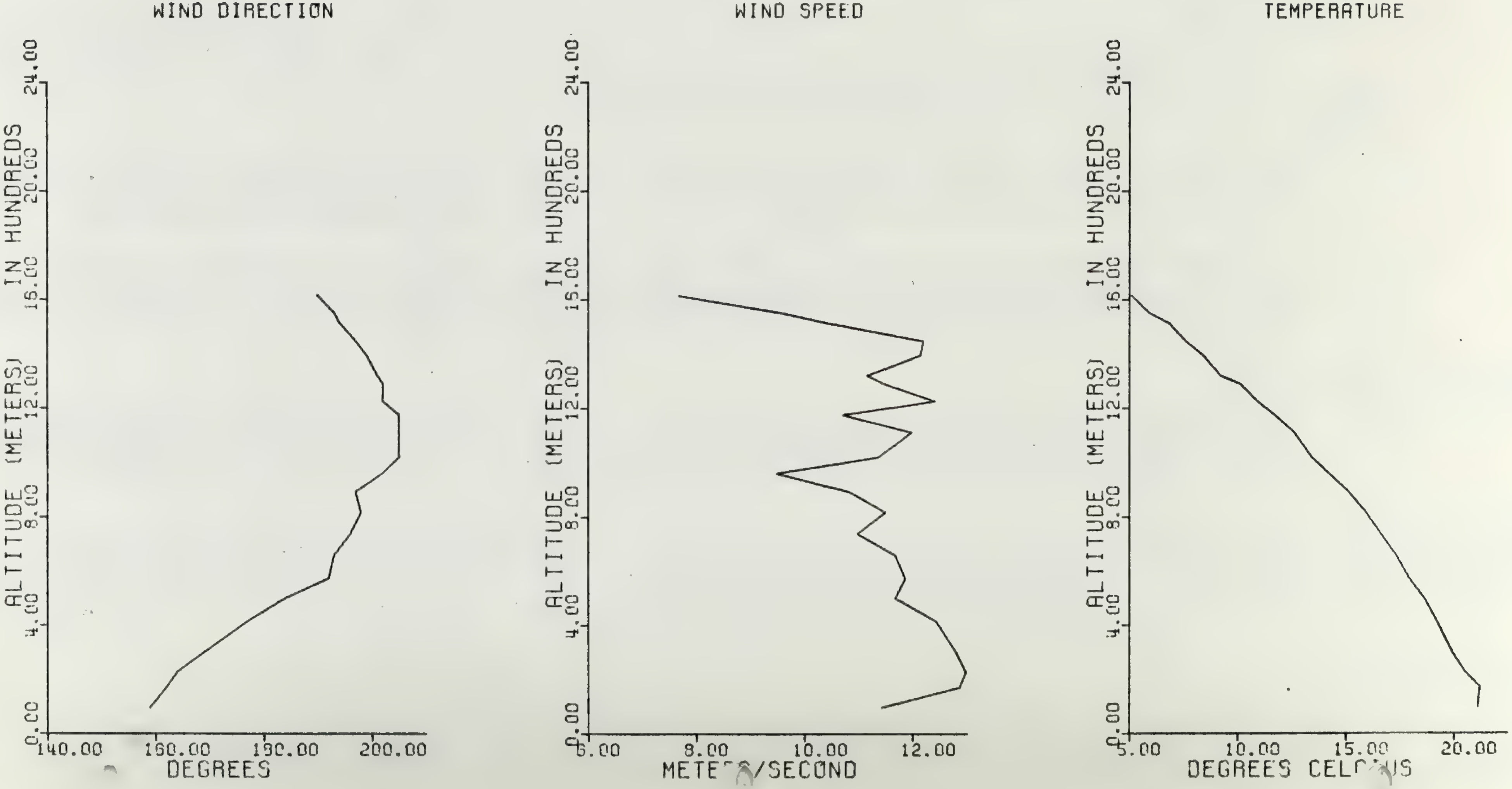
           321.      159.      37.5   21.1
           560.      162.      42.2   21.2
           751.      164.      42.6   20.5
           988.      169.      42.0   19.9
          1358.      177.      40.8   19.2
          1645.      184.      38.3   18.6
          1884.      192.      38.9   17.9
          2164.      193.      38.3   17.3
          2425.      196.      36.0   16.6
          2686.      198.      37.7   15.9
          2934.      197.      35.5   15.1
          3156.      202.      31.1   14.2
          3349.      205.      37.3   13.4
          3651.      205.      39.3   12.6
          3860.      205.      35.1   11.7
          4030.      202.      40.7   10.9
          4238.      202.      37.6   10.1
          4339.      201.      36.6    9.2
          4583.      199.      39.8    8.4
          4755.      197.      40.0    7.6
          4974.      194.      34.2    6.8
          5094.      193.      31.4    5.9
          5297.      190.      25.2    5.1


         HEIGHT   DIRECTION   SPEED   TEMP
         METERS    DEGREES    M/SEC   DEG C

            98.      159.      11.4   21.1
           171.      162.      12.9   21.2
           229.      164.      13.0   20.5
           301.      169.      12.8   19.9
           414.      177.      12.4   19.2
           502.      184.      11.7   18.6
           574.      192.      11.9   17.9
           660.      193.      11.7   17.3
           739.      196.      11.0   16.6
           819.      198.      11.5   15.9
           894.      197.      10.8   15.1
           962.      202.       9.5   14.2
          1021.      205.      11.4   13.4
          1113.      205.      12.0   12.6
          1176.      205.      10.7   11.7
          1228.      202.      12.4   10.9
          1292.      202.      11.5   10.1
          1323.      201.      11.2    9.2
          1397.      199.      12.1    8.4
          1449.      197.      12.2    7.6
          1516.      194.      10.4    6.8
          1553.      193.       9.6    5.9
          1614.      190.       7.7    5.1
```

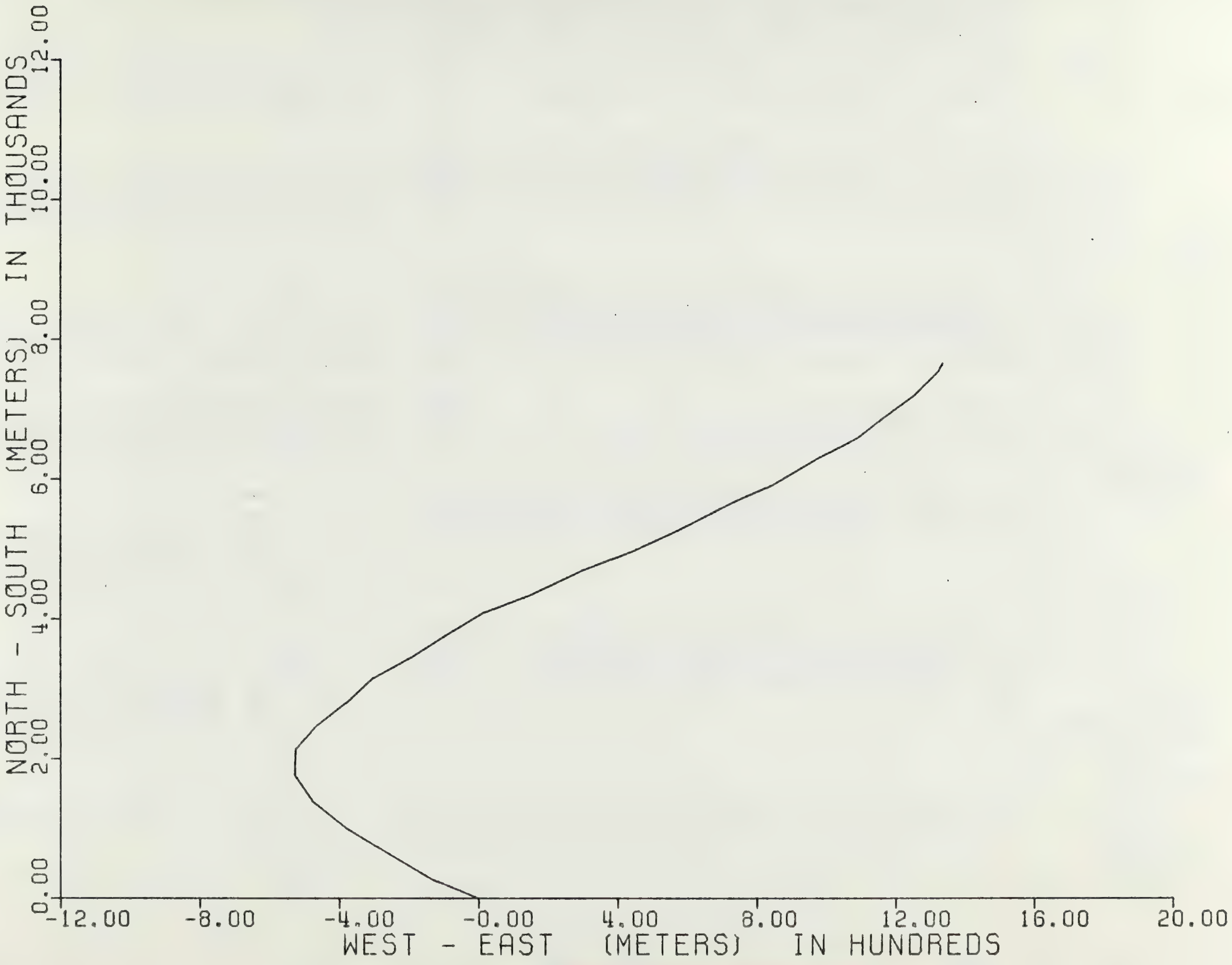
C-B PIBAL SOUNDING

TIME 645   DATE 6/27/78



TIME 645   DATE 6/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-27-76                                       ** SUSPECT DATA **

BALLOON RELEASED 1400 MST


BASE LINE ANGLE             239.5
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                     THEODOLITE #1                THEODOLITE #2

   TIME        AZIMUTH  ELEVATION           AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0             0.0        0.0              59.5       -0.0         0.0
   0.5           357.1       19.1              52.6        3.5        26.8
   1.0           356.9       17.4              45.5        6.1        25.5
   1.5           356.2       14.9              38.3        7.7        24.3
   2.0           356.4       14.2              33.6        8.9        23.0
   2.5           355.9       14.1              28.7       10.3        21.8
   3.0           356.5       14.9              26.7       11.4        20.5
   3.5           355.4       15.9              23.4       13.1        19.3
   4.0           355.0       18.1              21.2       15.3        18.0
   4.5           353.1       18.4              18.1       16.3        16.8
   5.0           351.5       19.0              15.2       17.1        15.3
   5.5           350.3       19.2              12.6       18.1        13.9
   6.0           350.3       19.8              11.9       18.9        12.4
   6.5           351.1       20.2              11.3       19.6        10.9
   7.0           353.2       20.9              12.1       19.6         9.5
   7.5           355.3       20.0              12.8       19.4         8.0
   8.0           357.6       19.8              13.4       19.2         7.0
   8.5           358.2       18.9              13.6       18.3         6.4
   9.0           359.5       17.3              13.8       17.4         6.1
   9.5             0.3       17.1              13.9       16.9         5.9
  10.0             1.1       16.4              13.9       16.4         5.6
  10.5             1.6       15.9              13.9       16.1         5.4
  11.0             2.2       15.5              14.0       15.9         5.1
  11.5             2.8       15.4              13.9       15.8         4.2
  12.0             3.1       15.1              14.0       15.7         3.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      170.9        5.9
     2      225.2        7.4
     3      287.7        9.1
     4      349.5       10.7
     5      428.3       12.7
     6      466.3       14.0
     7      557.1       15.7
     8      612.6       17.3
     9      679.3       18.8
    10      665.8       20.4
    11      786.9       22.1
    12      845.7       23.0
    13      931.1       24.6
    14      797.1       26.1
    15      978.4       27.4
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16      989.9        29.8
17      949.5        30.3
18     1111.3        31.7
19     1003.5        33.3
20     1044.6        34.9
21     1099.1        36.0
22     1165.7        37.0
23     1173.2        39.2
24     1247.0        39.5


      HEIGHT   DIRECTION   SPEED   TEMP
       FEET     DEGREES   FT/SEC  DEG C

        321.      178.      30.4   26.8
        626.      176.      35.8   25.5
        889.      177.      36.4   24.3
       1136.      176.      37.0   23.0
       1478.      177.      32.5   21.8
       1772.      174.      28.5   20.5
       2211.      171.      30.5   19.3
       2812.      164.      28.9   18.0
       3182.      157.      31.2   16.8
       3606.      158.      33.0   15.3
       4050.      162.      24.0   13.9
       4364.      178.      21.1   12.4
       4797.      193.      27.3   10.9
       5168.      205.      28.7    9.5
       5302.      202.      37.5    8.0
       5708.      201.      28.7    7.0
       5537.      200.      21.4    6.4
       5424.      197.      30.4    6.1
       5578.      194.      31.1    5.9
       5655.      194.      26.8    5.6
       5690.      196.      21.2    5.4
       5755.      194.      30.7    5.1
       6052.      194.      23.3    4.2


      HEIGHT   DIRECTION   SPEED   TEMP
      METERS    DEGREES    M/SEC  DEG C

         98.      178.       9.3   26.8
        191.      176.      10.9   25.5
        271.      177.      11.1   24.3
        346.      176.      11.3   23.0
        450.      177.       9.9   21.8
        540.      174.       8.7   20.5
        674.      171.       9.3   19.3
        857.      164.       8.8   18.0
        970.      157.       9.5   16.8
       1099.      158.      10.1   15.3
       1234.      162.       7.3   13.9
       1330.      178.       6.4   12.4
       1462.      193.       8.3   10.9
       1575.      205.       8.7    9.5
       1616.      202.      11.4    8.0
       1740.      201.       8.7    7.0
       1688.      200.       6.5    6.4
       1653.      197.       9.3    6.1
       1700.      194.       9.5    5.9
       1724.      194.       8.2    5.6
       1734.      196.       6.5    5.4
       1754.      194.       9.4    5.1
       1845.      194.       7.1    4.2
```
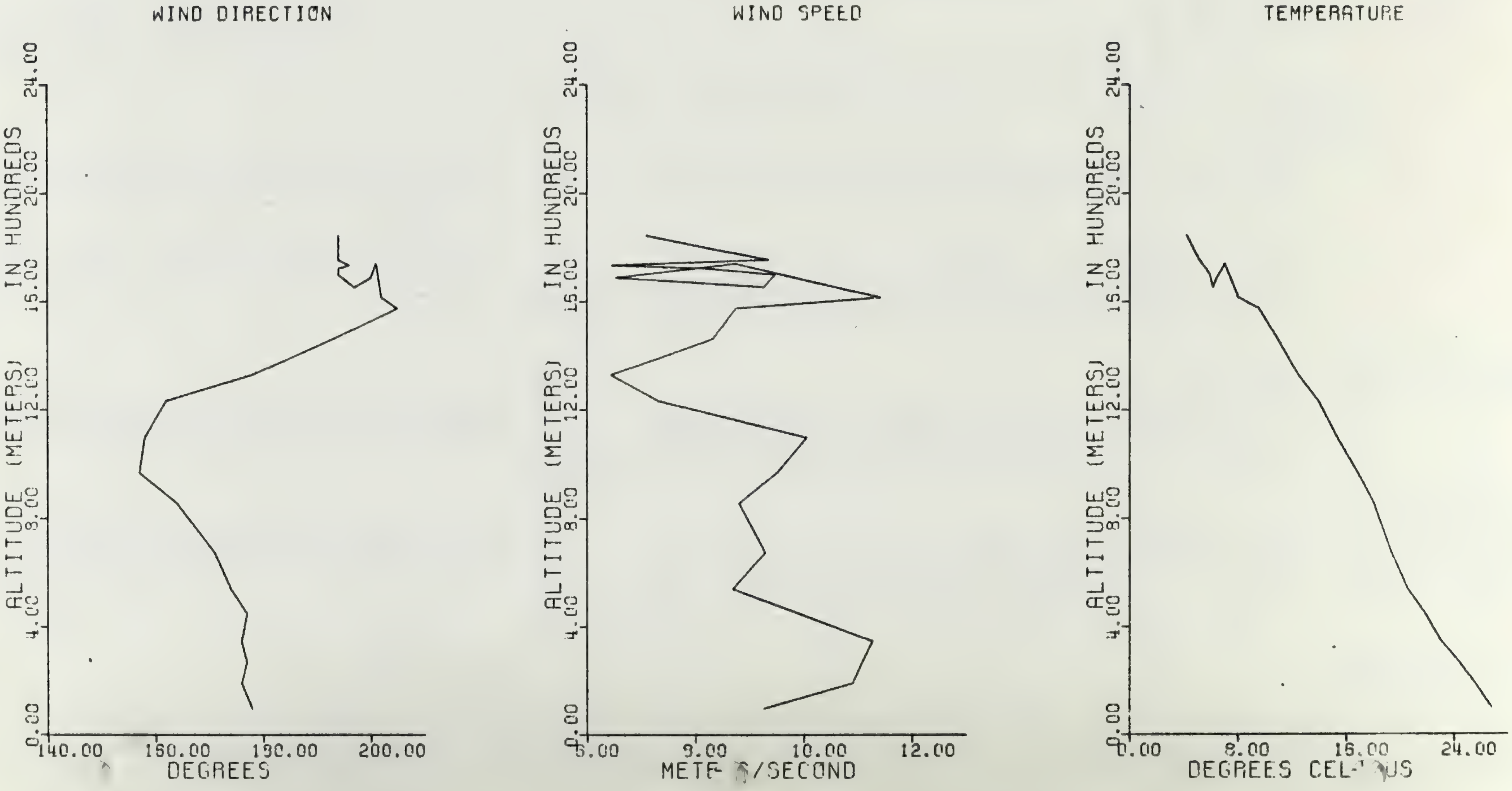

C-B PIBAL SOUNDING

TIME 1400 DATE 6/27/78



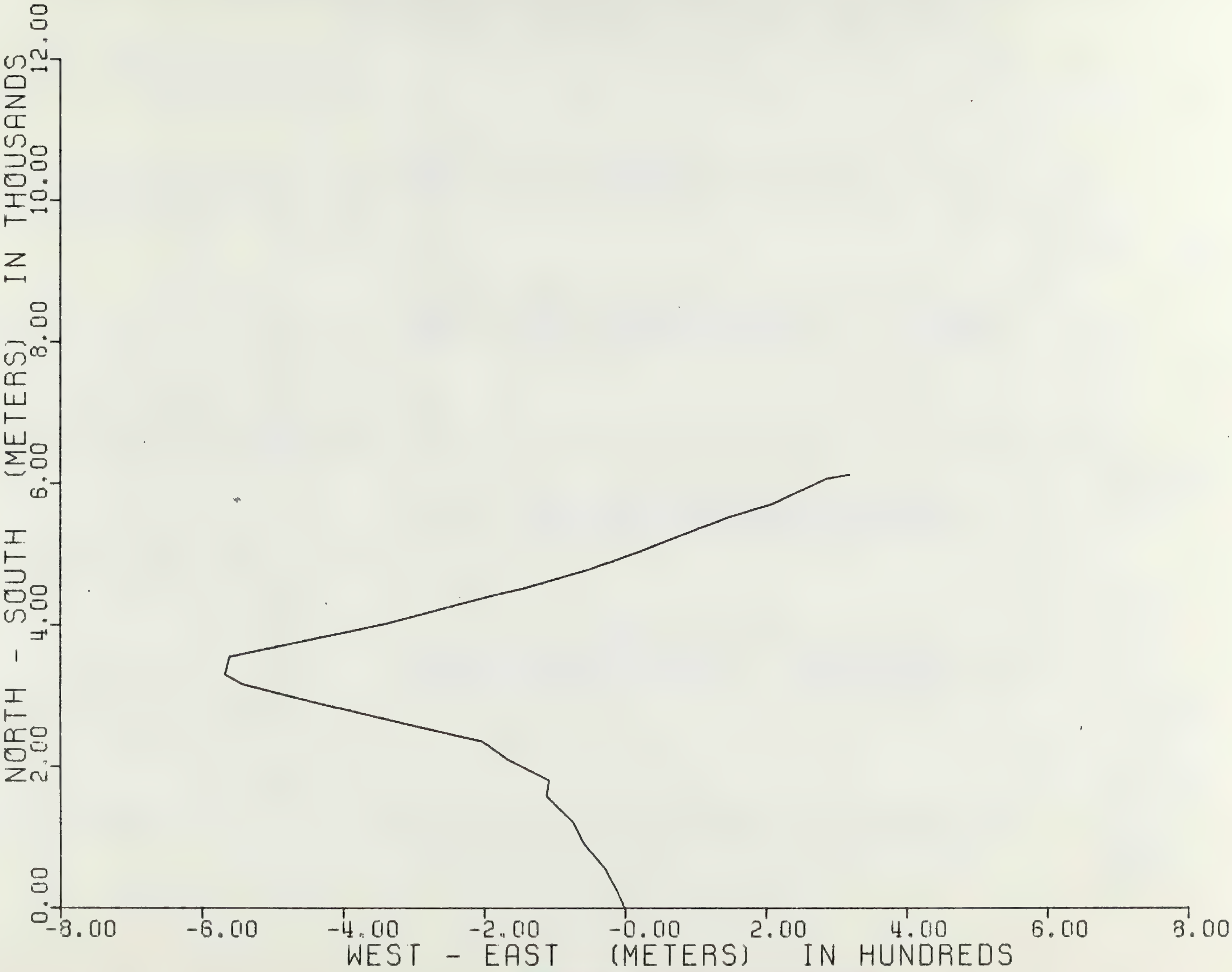
WIND DIRECTION

WIND SPEED

TEMPERATURE

TIME 1400 DATE 6/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



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C-B PIBAL SOUNDING

SOUNDING DATE  6-29-78                                    ** SUSPECT DATA **

BALLOON RELEASED  645 MST


BASE LINE ANGLE            239.5
BASE LINE LENGTH (FT)     5426.5
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)      100.0


                  THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0           59.5       -0.0        0.0
   0.5        296.1       24.0           54.9        3.2       12.6
   1.0        309.5       28.1           49.5        6.1       13.2
   1.5        320.1       31.8           46.4        8.8       13.8
   2.0        326.2       34.8           44.3       11.2       13.5
   2.5        333.3       35.7           42.2       13.1       13.3
   3.0        345.6       36.2           40.5       14.8       13.0
   3.5        354.9       36.9           41.2       15.8       12.8
   4.0          1.2       37.3           44.6       15.9       12.5
   4.5          4.3       38.6           48.7       16.2       12.3
   5.0          6.1       41.2           49.6       16.9       12.1
   5.5          9.0       43.6           50.3       17.5       11.8
   6.0         12.8       46.0           57.1       24.3       11.6
   6.5         20.6       47.8           57.8       25.5       10.9
   7.0         31.2       48.4           60.2       24.8       10.0
   7.5         41.8       48.0           61.2       25.1        9.3
   8.0         50.5       46.4           62.1       25.4        8.7
   8.5         55.0       45.6           63.0       25.8        8.1
   9.0         57.5       44.4           63.9       26.1        7.4
   9.5         59.6       43.6           65.0       26.6        6.8
  10.0         61.2       42.7           66.0       27.1        6.1
  10.5         62.6       42.3           67.5       27.8        5.4
  11.0         64.6       41.8           68.6       28.5        4.6
  11.5         66.2       41.8           69.3       29.1        3.9
  12.0         67.6       41.7           69.8       29.9        3.1


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      147.7       5.0
     2      123.7       5.5
     3      140.7       6.1
     4      152.3       6.6
     5      168.6       7.2
     6      162.1       8.2
     7      192.8       9.0
     8      354.8       8.8
     9      589.4       8.2
    10      591.7       8.3
    11      562.6       8.4
    12     1546.1       8.3
    13     1530.4       9.2
    14     1460.5       9.8
    15     1291.2      11.4
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 16    1089.2        13.6
 17     989.3        15.0
 18    1007.4        16.2
 19    1073.4        17.3
 20    1164.0        18.6
 21    1364.3        19.5
 22    1418.3        21.5
 23    1392.3        23.1
 24    1341.9        25.6


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC  DEG C

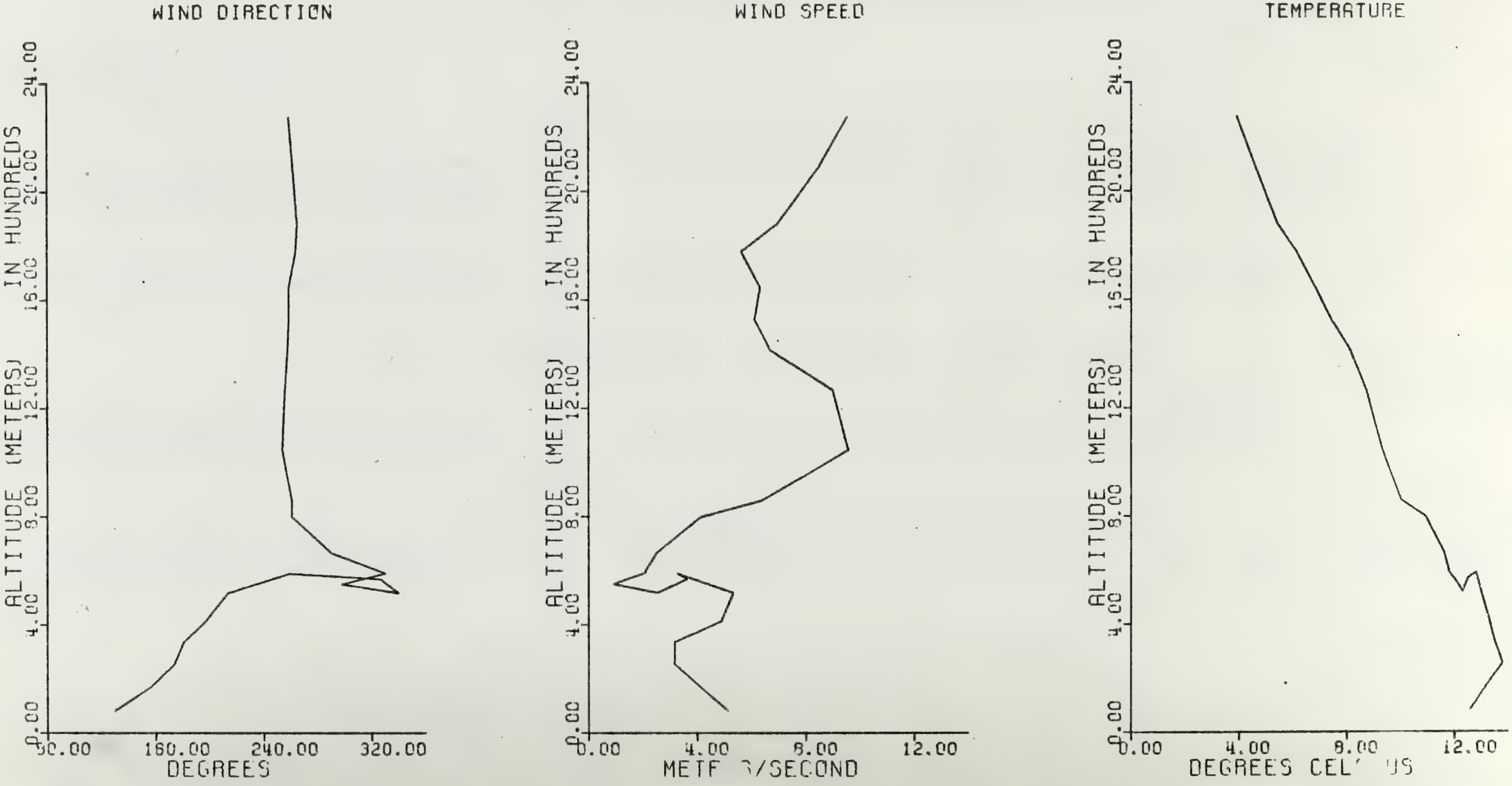
          271.     130.      16.8   12.6
          563.     157.      13.4   13.2
          836.     174.      10.4   13.8
         1101.     181.      10.4   13.5
         1352.     197.      16.0   13.3
         1701.     214.      17.5   13.0
         1934.     259.      10.7   12.8
         1867.     327.      11.9   12.5
         1702.     340.       8.3   12.3
         1807.     298.       3.0   12.1
         1938.     330.       6.7   11.8
         2184.     290.       8.2   11.6
         2623.     261.      13.6   10.9
         2816.     261.      20.9   10.0
         3434.     254.      31.4    9.3
         4156.     256.      29.5    8.7
         4641.     258.      21.9    8.1
         5009.     259.      20.0    7.4
         5402.     259.      20.7    6.8
         5833.     264.      18.4    6.1
         6169.     265.      22.8    5.4
         6847.     262.      27.7    4.6
         7464.     259.      31.2    3.9


        HEIGHT  DIRECTION   SPEED  TEMP
        METERS   DEGREES   M/SEC   DEG C

           83.     130.       5.1   12.6
          172.     157.       4.1   13.2
          255.     174.       3.2   13.8
          336.     181.       3.2   13.5
          412.     197.       4.9   13.3
          518.     214.       5.3   13.0
          590.     259.       3.3   12.8
          569.     327.       3.6   12.5
          519.     340.       2.5   12.3
          551.     298.       0.9   12.1
          591.     330.       2.0   11.8
          666.     290.       2.5   11.6
          799.     261.       4.1   10.9
          858.     261.       6.4   10.0
         1047.     254.       9.6    9.3
         1267.     256.       9.0    8.7
         1415.     258.       6.7    8.1
         1527.     259.       6.1    7.4
         1646.     259.       6.3    6.8
         1778.     264.       5.6    6.1
         1880.     265.       6.9    5.4
         2087.     262.       8.4    4.6
         2275.     259.       9.5    3.9
```

C-B PIBAL SOUNDING

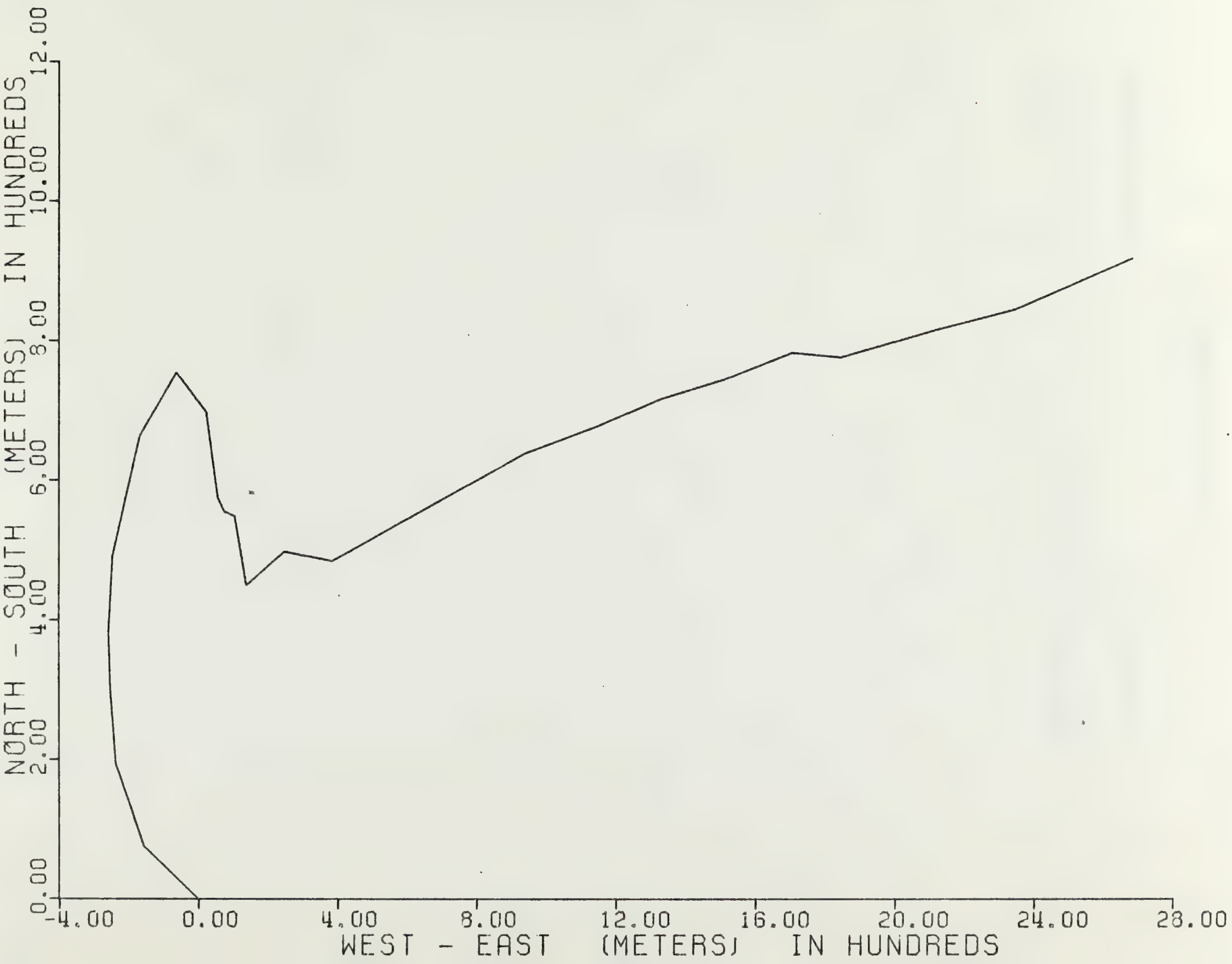
TIME 645   DATE 6/29/78



C-B PIBAL SOUNDING

TIME 645   DATE 6/29/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN



C-b PIBAL SOUNDING

Time: P.M. Date: 6/29/78

NO LAUNCH DUE TO RAIN.

C-b PIBAL SOUNDING

Time: 0645 Date: 6/30/78

DATA NOT REDUCED. INSUFFICIENT DATA POINT DUE TO LOW CLOUD COVER.

C-b PIBAL SOUNDING

Time: P.M. Date: 6/30/78

NO LAUNCH DUE TO RAIN.

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
JUNE, 1978
OCCIDENTAL OIL SHALE, INC.

	WS	WD	MIXING HT	INVERS. HT	STB 50m	STB 200m	PART	PRECIP
MULTIPOINT RECORDER	93	100						
DATA ACQUISITION SYSTEM	0	0						
OTHER SYSTEMS			65	65	65	65	90	100
MONTHLY TOTAL	93	100	65	65	65	65	90	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
JUNE, 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3	SO_2	H_2S	THC	CH_4	NMHC
MULTIPOINT RECORDER	99	99	99	99	99	100	94	94	94
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	99	99	99	99	99	100	94	94	94

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
JUNE, 1978
OCCIDENTAL OIL SHALE, INC

	CO	BAR. PRES.	SOLAR RAD.	WS 10m	WS 30m	WS 60m	WD 10m	WD 30m	WD 60m
MULTIPOINT RECORDER	94	94	0	99	99	99	99	99	99
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	94	94	0	99	99	99	99	99	99

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
JUNE, 1978
OCCIDENTAL OIL SHALE, INC.

	Hor. WD 60m	TMP 10m	DT 60-10m	RH	PART	PREC
MULTIPOINT RECORDER	0	99	34			
DATA ACQUISITION SYSTEM	0	0	0			
OTHER SYSTEMS				84	100	100
MONTHLY TOTALS	0	99	34	84	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 042
JUNE 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	100	99	100	100
MONTHLY TOTALS	100	99	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 056
JUNE, 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	0	0	0	100
MONTHLY TOTALS	0	0	0	100

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 20
June 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	2	00	30.9	μg/m^3
		2	26	00	27.9	μg/m^3
		3	20	00	27.2	μg/m^3
		4	17	00	26.2	μg/m^3
		5	23	00	24.1	μg/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
June 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Sulfur Dioxide	3-hr	1	30	17	24.0	$\mu g/m^3$
		2	1	3	15.0	$\mu g/m^3$
		3	1	6	13.0	$\mu g/m^3$
		4	1	9	13.0	$\mu g/m^3$
		5	1	14	13.0	$\mu g/m^3$
	24-hr	1	1	2	11.0	$\mu g/m^3$
		2	23	17	10.0	$\mu g/m^3$
		3	24	17	10.0	$\mu g/m^3$
		4	25	17	10.0	$\mu g/m^3$
		5	27	9	10.0	$\mu g/m^3$
Ozone	1-hr	1	25	17	98.0	$\mu g/m^3$
		2	25	18	98.0	$\mu g/m^3$
		3	25	19	98.0	$\mu g/m^3$
		4	26	15	98.0	$\mu g/m^3$
		5	26	16	98.0	$\mu g/m^3$

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
June 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	2	00	33.1	$\mu g/m^3$
		2	17	00	28.4	$\mu g/m^3$
		3	23	00	27.6	$\mu g/m^3$
		4	20	00	27.3	$\mu g/m^3$
		5	8	00	26.2	$\mu g/m^3$
Carbon Monoxide	1-hr	1	14	21	2100.0	$\mu g/m^3$
		2	12	17	1900.0	$\mu g/m^3$
		3	5	9	1700.0	$\mu g/m^3$
		4	14	20	1500.0	$\mu g/m^3$
		5	1	21	1100.0	$\mu g/m^3$
	8-hr	1	1	15	1030.0	$\mu g/m^3$
		2	2	1	870.0	$\mu g/m^3$
		3	7	13	790.0	$\mu g/m^3$
		4	6	13	770.0	$\mu g/m^3$
		5	12	15	740.0	$\mu g/m^3$

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 42
June 1978

OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	17	00	52.0	$\mu g/m^3$
		2	11	00	32.2	$\mu g/m^3$
		3	23	00	31.2	$\mu g/m^3$
		4	26	00	30.6	$\mu g/m^3$
		5	14	00	28.8	$\mu g/m^3$

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 56
June 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	23	00	25.0	$\mu g/m^3$
		2	26	00	23.5	$\mu g/m^3$
		3	20	00	21.2	$\mu g/m^3$
		4	17	00	20.6	$\mu g/m^3$
		5	2	00	20.1	$\mu g/m^3$

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DATA REPORT

	1978																PAGE
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									
SITE 020																	
NO			☒														
NO_x			☒														
NO_2			☒														
O_3			☒														
CO																	
SO_2																	
H_2S																	
WIND SPEED			☒														
WIND DIRECTION			☒														
TEMPERATURE			☒														
MIXING HT.			☒														
INVERSION HT.			☒														
STABILITY 50m			☒														
STABILITY 200m			☒														
PARTICULATE			☒														
PRECIPITATION			☒														
SITE 023																	
NO			☒														
NO_x			☒														
NO_2			☒														
O_3			☒														
SO_2			☒														
H_2S			☒														
THC			☒														

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 023 (Cont'd)																	
CH_4			X														
NMHC			X														
CO			X														
PRESSURE			X														
SOLAR RADITION			X														
WIND SPEED 10m			X														
WIND SPEED 30m			X														
WIND SPEED 60m			X														
WIND DIRECTION 10m			X														
WIND DIRECTION 30m			X														
WIND DIRECTION 60m			X														
HOR. WIND DIR. 60m																	
TEMPERATURE 10m			X														
TEMPERATURE 30m																	
TEMPERATURE 60m																	
DELTA T 60-10m			X														
RELATIVE HUMIDITY			X														
PARTICULATES			X														
PRECIPITATION			X														
EVAPORATION			X														
PILOT BALLOONS			X														

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 042																	
WIND SPEED 10m			☒														
WIND DIRECTION 10m			☒														
TEMPERATURE 10m			☒														
PARTICULATE			☒														
SITE 056																	
WIND SPEED 10m			☒														
WIND DIRECTION 10m			☒														
TEMPERATURE 10m			☒														
PARTICULATE			☒														

Malfunction Codes

Numerical Entry Code	Letter Code	Description
9000	CA	Calibration (calibration, system check)
9100	MT	Maintenance (changing paper, tape, charcoal)
9200	FO	Flame Out (on the GC-THC, HC, CH_4, CO)
9300	IM	Instrument Malfunction (instrument failures)
9400	PF	Power Failure (generator failure)
9500	RF	Recording System Failure (chart jams, runs out)
9550	NV	Not Visible (values were not within range of instrument i.e. inversion heights may exist beyon the full scale of the Acoustic Radar)
9600	LI	Local Interference (car nearby)
9650	OE	Operator Error (Field tech leaves switch in wrong position out of AV's control.)
9700	OS	Off Scale (at top of chart)
9750	IN	Interference (CO_2 interference on sulfur data, SO_2 interference in oxidant readings)
9800	SE	Special Experiment
9850	OR	Out for Repair (instrument removed from site with no replacement)
9900	VA	Variable Wind Direction
9950	CM	Calm (no wind direction when wind speed = 0)
9980	UN	Unlimited Ceiling (reported by NWS Stations)
9900		Blank (causes a space to be printed as in the beginning of a new month before a component starts)
8000	TR	Trace of Precipitation

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	13	8	8	8	8	6	6	6	6	4	8	8	6	9	9	8	13
7	6	4	4	4	4	4	8	6	6	4	8	4	0	9	0	0	0	4	0	4	4	4	4	8	4	9
8	6	4	4	0	0	6	11	11	8	0	0	0	0	8	0	0	0	0	0	4	0	0	6	6	4	11
9	8	4	4	4	4	8	6	6	4	0	0	8	0	0	0	0	0	0	0	0	6	8	4	6	4	8
10	6	4	4	4	4	8	11	4	4	0	4	0	4	4	4	4	0	4	4	0	0	4	4	4	4	11
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	32	17	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	32
13	0	0	32	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	32
14	0	0	38	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	38
15	0	0	34	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	34
16	0	0	30	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	30
17	0	0	28	15	6	8	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	4	28
18	4	0	26	32	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	11	0	0	0	4	32
19	0	4	38	6	0	15	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	4	38
20	0	0	38	45	6	26	8	9	0	0	0	0	0	15	0	0	0	0	0	0	0	0	4	6	6	45
21	4	0	23	28	6	9	23	0	0	0	0	0	0	8	0	0	0	0	0	4	0	0	8	6	6	28
22	4	6	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	2	11
23	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	8	0	2	8
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
26	8	0	9	0	0	9	9	0	0	17	6	0	0	0	0	0	0	0	0	0	0	0	4	9	4	17
27	0	0	0	0	0	0	9	6	8	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0	2	38
28	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	19	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
AV	2	2	13	8	2	4	6	2	2	2	2	2	0	2	2	0	0	0	0	2	2	2	2	2	2	
PK	8	6	38	45	6	26	23	11	19	17	8	8	8	15	38	6	9	6	6	9	11	8	9	9		45

REVISED 11/21/78

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11
7	0	0	0	0	0	0	0	0	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2	4	4	2	2	0	0	0	4	0	0	0	4	4	4	2	0	0	0	0	0	11	4	0	2	11
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	4	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
21	0	4	2	2	2	2	2	2	2	2	2	2	2	0	0	0	2	0	2	0	0	0	0	0	2	4
22	0	0	2	2	0	0	0	4	4	2	2	0	0	0	0	47	0	0	2	0	0	0	0	0	2	47
23	11	2	2	0	4	9	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	19
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	2	0	2	0	38	0	0	0	0	0	0	0	4	6	2	38
26	0	0	0	0	19	0	0	0	9	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	2	19
27	(OE)	(OE)	(OF)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	6	6	0	0	0	0	6
30	0	0	2	2	2	6	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
31	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
AV	0	2	0	0	2	0	2	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	
PK	11	15	4	2	19	9	19	4	9	9	4	2	4	4	38	47	2	2	4	6	6	11	6	6		47

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	9	5	5	5	5	4	4	4	4	2	5	5	4	6	6	5	9
7	4	2	2	2	2	2	5	4	4	2	5	2	0	6	0	0	0	2	0	2	2	2	2	5	2	6
8	4	2	2	0	0	4	7	7	5	0	0	0	0	5	0	0	0	0	0	2	0	0	4	4	2	7
9	5	2	2	2	2	5	4	4	2	0	0	5	0	0	0	0	0	0	0	0	4	5	2	4	2	5
10	4	2	2	2	2	5	7	2	2	0	2	0	2	2	2	2	0	2	2	0	0	2	2	2	2	7
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	21	11	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	21
13	0	0	21	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	21
14	0	0	24	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	24
15	0	0	22	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22
16	0	0	20	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	20
17	0	0	18	10	0	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18
18	0	0	17	18	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	0	0	0	1	18
19	0	2	24	4	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	24
20	0	0	24	29	4	7	5	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	4	4	29
21	2	0	15	18	4	4	11	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	4	2	2	18
22	2	2	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	6
23	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	5	0	1	5
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
26	2	0	5	0	0	4	4	0	0	11	4	0	0	0	0	0	0	0	0	0	0	0	2	0	1	11
27	0	0	0	0	0	0	5	4	5	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	1	24
28	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	(HT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	1	0	9	5	0	1	4	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	1	
PK	5	2	24	29	4	7	11	7	5	11	5	5	5	6	24	4	4	4	4	5	5	5	6	6		29

REVISED 11/21/78

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	2	2	1	1	0	0	0	0	0	0	0	2	2	2	1	0	0	0	0	0	2	2	0	1	2
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	1	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
23	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	0	0	0	0	0	0	0	0	0	4
26	0	0	0	0	0	0	0	0	1	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	1
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	1	2	2	1	1	0	1	0	2	4	1	1	2	2	4	1	0	0	0	0	0	2	2	0		4

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	6	0	0	0	9
18	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
19	0	0	0	0	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
20	0	0	0	0	0	15	0	4	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	2	15
21	0	0	0	0	0	4	6	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	2	0	6
22	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
26	4	0	2	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	9
27	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	19	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
AV	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	4	2	2	4	6	15	6	4	19	0	0	0	0	9	0	0	9	0	0	9	4	6	2	9		19

REVISED 11/21/78

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

	HOUR (LOCAL STANDARD TIME)																									
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11
7	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	4	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
21	0	4	2	2	2	2	2	2	2	2	2	0	2	0	0	0	2	0	2	0	0	0	0	0	2	4
22	0	0	2	2	0	0	0	4	4	2	2	0	0	0	0	45	0	0	2	0	0	0	0	0	2	45
23	11	2	2	0	4	9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	4	6	2	32
26	0	0	0	0	19	0	0	0	8	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	2	19
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	6	6	0	0	0	0	6
30	0	0	2	2	2	6	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
31	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
AV	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	
PK	11	15	2	2	19	9	17	4	8	4	4	0	2	0	32	45	2	2	4	6	6	11	6	6		45

OZONE
(UG/M3)

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	131	73	73	84	84	69	49	49	0	0	0	0	0	0	0	41	131
7	0	0	0	0	0	0	0	0	0	0	0	0	69	124	88	84	78	69	73	69	33	39	29	20	31	124
8	0	0	0	20	20	12	0	0	33	33	45	51	65	61	61	53	49	45	51	20	0	12	0	0	26	65
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	69	110	120	129	131	143	151	147	143	143	137	137	137	137	137	82	151
11	118	106	112	118	118	122	126	128	131	143	157	133	128	157	59	59	57	57	59	59	57	59	57	57	98	157
12	59	57	59	59	59	57	59	57	53	53	59	57	51	59	59	59	61	57	59	59	59	59	59	61	57	61
13	65	69	63	65	67	65	65	59	57	57	61	59	57	57	59	59	57	55	55	53	53	53	55	59	59	69
14	55	51	51	41	33	33	33	39	78	80	98	90	90	106	88	78	78	84	84	69	65	59	39	39	65	106
15	41	26	26	45	57	59	59	69	98	118	120	108	108	108	108	108	102	88	98	98	90	69	61	59	80	120
16	71	71	71	69	71	69	61	78	98	92	108	108	118	118	118	128	128	118	118	118	98	88	98	104	96	128
17	100	92	78	69	78	59	65	92	106	110	96	84	82	77	84	84	71	69	61	51	51	71	80	59	78	110
18	27	10	4	2	0	0	10	39	75	75	78	78	88	92	92	82	73	51	69	55	41	20	10	6	45	92
19	16	8	8	0	10	8	0	29	47	55	51	51	59	63	63	65	65	73	67	61	41	41	24	12	37	73
20	18	22	14	16	18	18	18	27	51	61	63	61	69	88	80	80	77	73	80	75	39	37	27	24	47	88
21	31	27	14	10	0	0	6	10	18	18	31	39	47	59	61	71	80	80	77	57	47	33	18	0	35	80
22	10	0	0	0	0	0	0	16	27	20	22	47	61	63	43	35	33	31	31	26	14	0	0	0	20	63
23	0	0	0	0	0	0	0	0	10	10	26	29	29	29	35	22	20	20	18	10	0	0	0	0	10	35
24	0	0	0	0	0	0	0	0	14	22	14	12	14	22	12	20	14	16	14	0	0	0	0	0	8	22
25	0	0	0	0	0	0	0	0	12	10	8	10	12	14	20	18	12	16	10	0	14	20	10	0	8	20
26	0	0	0	0	0	0	0	(CA)	120	129	80	69	57	47	43	47	51	53	51	24	14	14	6	0	35	129
27	12	12	0	0	0	0	0	0	20	41	41	43	61	55	63	63	59	49	53	45	41	39	35	37	31	63
28	39	37	39	39	35	29	29	37	47	51	51	61	59	55	51	57	49	43	49	53	26	26	20	20	41	61
29	14	37	45	31	22	16	12	22	37	49	57	59	51	49	47	51	53	47	39	31	22	35	27	24	37	59
30	12	10	10	12	8	8	10	16	33	39	47	51	55	57	55	57	57	53	49	39	26	26	29	22	33	57
31	24	29	39	37	37	37	35	37	49	67	(MT)	55	57	57	67	67	67	67	67	59	49	49	49	39	49	67
AV	27	27	26	26	26	24	24	31	49	59	59	59	65	71	65	63	61	57	57	49	39	37	33	29	45	
PK	118	106	112	118	118	122	126	128	131	143	157	133	129	157	143	151	147	143	143	137	137	137	137	137		157

OZONE
(UG/M3)

CA-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

	HOUR (LOCAL STANDARD TIME)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	75	75	78	78	69	75	63	78	78	94	98	102	98	98	98	98	98	102	98	86	78	82	92	88	86	102
2	90	94	94	90	84	75	75	100	98	100	98	96	90	82	84	88	86	75	69	63	57	59	69	65	82	100
3	63	63	51	49	51	45	49	49	51	55	59	59	63	59	75	78	75	59	75	75	75	75	78	82	63	82
4	82	82	88	102	110	108	108	124	133	129	129	129	129	124	128	128	128	128	128	118	108	108	108	98	116	133
5	98	94	92	94	88	75	78	(CA)	94	98	108	128	128	118	118	124	128	122	122	108	94	94	94	88	104	128
6	90	88	78	82	88	78	75	88	98	102	106	112	124	122	124	126	128	124	124	108	100	84	90	86	102	128
7	80	71	78	80	82	78	73	78	88	110	128	145	129	129	129	126	118	120	116	92	78	78	77	77	98	145
8	80	82	78	78	75	73	65	69	92	104	108	108	116	118	118	118	118	122	118	108	104	98	92	106	98	122
9	90	90	90	100	90	77	59	55	71	82	86	90	98	102	100	100	102	104	104	96	88	78	78	75	88	104
10	75	82	80	77	62	71	69	80	86	86	88	94	100	98	100	104	104	96	92	100	100	92	92	92	90	104
11	88	84	82	80	78	82	78	80	82	84	78	78	78	98	112	126	128	120	116	114	106	108	100	108	96	128
12	98	92	94	92	94	86	82	98	108	114	112	118	118	120	120	118	118	118	118	114	114	106	108	114	108	120
13	116	114	112	108	108	96	96	96	108	112	118	116	116	118	120	120	120	122	120	110	96	96	96	94	110	122
14	94	98	98	98	96	94	80	86	100	108	114	110	110	108	104	104	100	98	94	88	80	78	86	86	96	114
15	92	94	96	98	94	92	86	92	104	116	116	116	114	118	118	114	112	108	108	104	102	98	98	92	104	118
16	90	92	92	86	88	88	90	98	110	114	112	108	118	118	126	126	131	129	133	129	118	118	114	118	110	133
17	112	106	108	106	106	102	102	120	126	128	126	122	122	122	128	135	120	110	96	96	106	122	118	112	114	135
18	110	108	102	98	96	94	110	126	126	128	126	122	120	131	133	135	139	135	135	126	116	114	102	104	118	139
19	106	102	94	77	80	98	100	108	122	126	129	126	122	122	118	120	124	129	133	124	116	106	104	100	112	133
20	100	96	98	100	96	102	102	112	(PF)	120	122	118	122	122	137	131	131	137	143	139	128	129	120	124	118	143
21	124	118	108	94	77	69	67	71	80	88	92	96	106	110	110	122	135	137	128	118	108	96	92	92	102	137
22	92	94	96	92	90	88	78	98	102	108	116	120	128	122	120	108	118	116	108	112	100	98	100	100	104	128
23	90	96	98	98	94	96	86	100	96	112	118	120	114	114	116	114	116	116	108	96	86	82	90	94	102	120
24	92	92	90	94	96	92	84	94	108	108	110	110	112	114	108	112	110	110	106	98	96	96	96	98	102	114
25	104	104	92	94	96	88	90	96	98	100	102	110	116	114	112	116	116	108	102	102	116	110	98	96	104	116
26	96	96	98	98	78	98	84	90	96	108	116	116	116	116	(CA)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	100	116
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	114	118	120	118	120	120	118	118	120	128	120	114	102	106	100	106	116	128
28	102	96	88	86	98	108	102	112	(MT)	98	98	98	102	102	100	100	100	94	82	96	78	86	78	67	94	112
29	67	86	88	88	88	59	57	77	86	100	114	116	102	94	86	100	104	100	82	75	59	77	75	67	84	116
30	65	59	49	45	55	61	57	63	77	90	104	106	110	108	108	108	110	108	102	98	90	90	88	88	84	110
31	86	86	92	96	90	92	82	80	84	96	98	96	98	96	98	104	102	102	98	96	86	75	82	71	92	104
AV	92	92	90	88	88	84	80	90	98	104	108	110	110	110	112	114	114	112	110	104	96	94	94	92	100	
PK	124	118	112	108	110	108	110	126	133	129	129	145	129	131	137	135	139	137	143	139	128	129	120	124		145

SULFUR DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10	16	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	16
3	10	10	10	10	10	10	10	10	10	10	0	0	5	5	5	5	5	5	5	5	5	5	3	0	8	10
4	0	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5	(CA)	(CA)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5
6	0	0	0	0	0	0	0	0	0	0	0	0	8	5	0	0	5	10	8	8	10	8	5	8	3	10
7	5	5	5	3	5	5	5	5	8	8	8	10	8	8	5	8	5	5	8	5	5	8	3	5	5	10
8	8	8	8	5	5	3	3	5	0	3	3	3	5	5	5	5	3	5	3	5	3	5	0	3	5	8
9	5	3	3	5	3	0	0	0	3	3	5	3	0	3	5	5	5	0	0	3	3	3	3	5	3	5
10	5	5	5	5	5	8	8	8	0	3	8	10	8	3	5	8	8	3	3	3	5	3	5	3	5	10
11	3	3	3	3	3	5	5	5	3	3	3	3	3	0	0	0	0	0	3	3	0	0	0	0	3	5
12	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
13	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	0	0	3
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	0
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3	0	0	0	0	3	3	5	5	0	5
AV	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
PK	10	10	10	10	10	10	10	16	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		16

HYDROGEN SULFIDE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	0
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0

TOTAL HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	1000	1100	1200	1200	1300	1300	1400	1400	1400	1400	1400	1500	1300	1500
8	1600	1500	1500	1600	1400	1600	1600	1600	1600	1800	1700	1500	1600	1500	1400	1400	1000	1200	1400	1400	1400	1500	1500	1500	1500	1600
9	1600	1600	1600	1600	1600	1700	1700	1300	1800	1800	1600	1300	1600	1300	900	1500	1400	1500	1400	1400	1400	(IM)	(IM)	(IM)	1500	1800
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	700	700	800	900	700	800	900	1000	1100	1100	1200	700	1000	700	700	700	900	1200
11	700	700	700	700	600	700	700	700	300	300	700	900	700	700	900	1000	1100	1200	1400	1500	1600	1800	1800	1900	1000	1900
12	2000	2000	2000	2000	2100	2200	2400	2600	2600	1000	1200	1400	1500	1600	1800	1800	1900	2000	2100	2100	2200	2200	2200	2300	2000	2600
13	2400	2400	2400	2500	2500	2600	2800	2900	900	900	600	800	1200	1300	1400	1500	1600	1400	1800	1900	2000	2100	2200	2300	1800	2900
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1200	300	300	300	300	300	300	300	400	500	500	500	500	700	500	1200
15	600	600	700	700	700	600	900	1000	1000	1000	700	400	500	500	500	300	500	500	500	600	700	700	700	700	600	1000
16	700	700	700	700	600	600	700	700	500	600	600	500	500	500	500	400	300	300	200	300	600	600	600	600	500	700
17	600	600	600	600	600	600	600	600	2000	2000	2000	2000	2000	2000	1700	1500	1400	1400	1500	1500	1600	1800	1800	1800	1400	2000
18	1800	1800	1800	1800	1900	1900	1900	1900	1900	1900	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	1900
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1500	(CA)	1000	1000	1200	1200	900	1000	1200	1400	1500	1500	1600	1600	1700	1700	1300	1700
21	1800	1700	1800	1800	1800	1800	1800	1800	1400	1200	1300	1300	1400	1400	900	1000	1200	1200	1300	1400	1400	1400	1500	1600	1500	1800
22	1600	1700	1700	1700	1700	1700	1800	2000	2100	2200	2200	2200	2100	2100	2000	2000	2000	1900	1900	1900	1900	1900	1900	1900	1900	2200
23	1900	1900	1900	1900	1800	1900	2000	2100	2100	2100	2100	2100	2100	2000	2000	2000	2000	1900	1900	1900	1900	1800	1800	1900	2000	2100
24	1600	1400	1400	1400	1400	1400	1400	1400	(CA)	1100	1300	1400	(CA)	1200	1200	1200	1300	1400	1600	1600	1600	1700	1800	1800	1500	1800
25	1800	1900	2000	2000	2000	2000	2000	2100	1100	(CA)	(CA)	(CA)	(CA)	1000	1200	1300	1400	1500	1600	1600	1700	1800	1800	1800	1700	2100
26	1800	1900	1900	2000	2000	2000	2000	2100	2200	1200	1100	1100	1100	1100	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	1700	2200
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	1100	1000	1100	1200	1300	1300	1400	1500	1600	1600	1600	1800	1800	1900	1900	1500	1900
28	1900	1900	1900	1900	1900	1900	2000	2000	1000	1000	1100	2400	2600	1600	1400	1400	1300	1300	1600	1600	1700	1800	2000	2000	1700	2600
29	2400	3900	4200	4000	3700	3700	4000	4500	4800	4800	4500	4200	4300	4500	5000	5000	4600	3800	3400	3200	2900	3300	2900	2900	3900	5000
30	2900	2900	3100	3300	3200	3200	3600	4200	4700	4900	4800	4400	4200	3700	3400	3000	2800	2500	2200	2000	2100	2300	2400	2400	3300	4900
31	2600	2700	2900	3100	3300	3500	4100	4300	1300	1400	1500	2800	1200	1400	1600	3500	3700	3400	3100	2800	2500	2600	2600	2600	2700	4300
AV	1700	1800	1800	1900	1800	1900	2000	2100	1800	1700	1600	1600	1600	1500	1500	1600	1600	1600	1600	1600	1600	1700	1700	1700	1600	
PK	2900	3900	4200	4000	3700	3700	4100	4500	4800	4900	4800	4400	4300	4500	5000	5000	4600	3800	3400	3200	2900	3300	2900	2900		5000

REVISED 11/21/78

METHANE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	800	800	900	900	800	800	800	800	800	800	800	800	800	800	900
8	800	800	900	800	800	900	900	900	800	900	900	900	900	800	800	800	800	800	800	800	800	800	800	800	800	900
9	900	900	900	900	900	900	900	900	800	800	800	800	800	800	800	800	800	800	800	800	800	(IM)	(IM)	(IM)	800	900
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
11	700	700	700	700	600	700	700	700	300	300	600	600	600	700	800	800	800	600	800	1100	(IM)	(IM)	(IM)	(IM)	700	1100
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	900	900	900	900	900	900	900	900	900	900	900	(IM)	(IM)	(IM)	900	900
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	900	600	800	900	900	900	900	900	900	900	900	900	900	900	900	900	900
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	700	700	700	700	600	600	700	700	500	600	600	500	500	500	500	400	300	300	200	300	600	600	600	600	500	700
17	600	600	600	600	600	600	600	600	1600	1600	1600	1600	1600	1600	1400	1200	1100	1100	1200	1200	1200	1400	1400	1400	1100	1600
18	1400	1400	1400	1400	1400	1400	1500	1500	1500	1500	(IM)	(IM)	(IM)	900	900	900	900	900	900	1100	(IM)	(IM)	(IM)	(IM)	1200	1500
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	500	500	500	500	600	600	600	600	600	700	1000	(IM)	(IM)	(IM)	600	1000
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	900	1000	1200	1100	900	900	900	900	900	900	900	(IM)	(IM)	(IM)	( )	1200
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	1000	1200	1200	1300	1400	1400	1400	1500	1600	( )	1600
22	1600	1600	1700	1700	1700	1700	1800	2000	2000	2200	2200	2200	2100	2100	2000	2000	2000	1900	1900	1900	1900	1900	1900	1900	1900	2200
23	1800	1800	1800	1800	1800	1800	1900	2000	2100	2100	2100	2100	2100	2000	2000	2000	2000	1900	1900	1900	1900	1800	1800	1900	1900	2100
24	1600	1400	1400	1400	1400	1400	1400	1400	(CA)	1100	1300	1400	(IM)	(IM)	(IM)	1200	1300	1400	1600	1600	1600	1700	1800	1300	1500	1800
25	1800	1900	2000	2000	2000	2000	2000	2100	(CA)	(CA)	(CA)	(CA)	(CA)	900	900	900	900	900	1100	1600	1700	1600	1800	1800	1600	2100
26	1800	1900	1900	2000	2000	2000	2000	2100	2200	1200	1100	1100	1100	1100	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	1700	2200
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
28	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
29	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
30	1000	1000	1000	1000	1000	1000	1000	1000	1100	1100	1100	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	1000	1100
31	900	900	900	900	900	900	900	900	900	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
AV	1200	1200	1200	1200	1200	1200	1200	1200	1200	1100	1000	1000	1000	1000	1000	1000	1000	1000	1000	1100	1100	1200	1200	1200	1100	
PK	1800	1900	2000	2000	2000	2000	2000	2100	2200	2200	2200	2200	2100	2100	2000	2000	2000	1900	1900	1900	1900	1900	1900	1900		2200

NON-METHANE HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	100	200	300	300	500	500	500	600	600	600	700	700	700	500	700
8	800	700	700	800	700	700	800	700	800	900	900	700	700	700	600	700	200	400	700	700	700	700	700	700	700	900
9	700	700	700	900	800	900	900	900	1000	1000	800	500	800	500	100	700	700	700	700	700	700	(IM)	(IM)	(IM)	700	1000
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	700	700	100	200	0	100	100	300	400	400	500	0	300	0	0	0	200	700
11	0	0	100	100	0	0	100	100	0	0	100	300	100	100	100	200	300	500	600	400	1600	1800	1600	1900	400	1900
12	2000	2000	2000	2000	2100	2200	2400	2600	2600	200	300	500	700	800	900	1000	1000	1100	1200	1200	1300	2200	2200	2300	1500	2600
13	2400	2400	2400	2500	2500	2600	2800	2900	0	100	0	0	300	400	500	600	700	500	900	1000	1000	1200	1300	1400	1200	2900
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1200	300	300	300	300	300	300	300	400	500	500	500	500	700	500	1200
15	600	600	700	700	700	600	900	1000	1000	1000	700	400	500	500	500	300	500	500	500	600	700	700	700	700	600	1000
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	400	400	500	500	500	400	300	300	300	300	300	300	300	400	400	400	300	500
18	400	400	400	400	500	500	400	400	400	400	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	500
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1500	(CA)	100	0	0	100	100	100	400	600	700	700	700	1600	1700	1700	700	1700
21	1800	1700	1800	1800	1800	1800	1800	1800	1400	1200	1300	1300	1400	1400	0	0	0	0	0	0	0	0	0	0	900	1800
22	0	100	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
23	100	100	100	100	0	100	100	100	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	100
24	0	0	0	0	0	0	0	0	(CA)	0	0	0	(CA)	1200	1200	0	0	0	0	0	0	0	0	0	100	1200
25	0	0	0	0	0	0	0	0	1100	(CA)	(CA)	(CA)	(CA)	100	300	400	500	600	500	0	0	0	0	0	200	1100
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	0	0
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	1100	100	100	300	300	300	400	500	600	700	700	800	900	900	900	600	1100
28	900	900	900	900	900	900	1000	1000	100	100	100	1400	1600	600	400	300	300	300	600	700	700	900	900	1000	700	1600
29	1300	2900	3200	2900	2600	2700	3000	3500	3800	3900	3500	3200	3300	3500	4000	4000	3600	2800	2400	2200	2000	2200	2000	1900	2900	4000
30	1900	2000	2100	2300	2200	2200	2600	3200	3600	3800	3700	3400	3200	2800	2400	2000	1800	1500	1200	1000	1100	1300	1400	1500	2300	3800
31	1600	1800	2000	2200	2400	2600	3200	3400	400	500	500	1800	200	400	600	2600	2800	2400	2200	1800	1400	1500	1500	1600	1700	3400
AV	800	800	900	900	900	900	1000	1100	900	800	700	700	700	600	600	700	700	600	700	600	700	800	800	800	700	
PK	2400	2900	3200	2900	2800	2700	3200	3500	3800	3900	3700	3400	3300	3500	4000	4000	3600	2800	2400	2200	2000	2200	2200	2300		4000

Revised 11/21/78

CARBON MONOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1800	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	1800
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	600	600	700	700	700	700	500	300	500	700	900	900	900	700	900
8	900	900	900	900	900	900	900	900	900	900	900	900	800	700	600	500	300	300	300	600	800	900	900	900	800	900
9	900	900	900	900	900	900	900	900	900	900	800	800	800	800	800	800	700	600	600	700	800	(IM)	(IM)	(IM)	800	900
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1000	800	700	500	500	600	600	600	700	700	700	700	700	700	700	1000
11	700	700	700	700	700	700	700	700	600	600	600	600	600	700	900	900	900	900	1000	1700	(IM)	(IM)	(IM)	(IM)	800	1700
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	(IM)	(IM)	(IM)	1000	1000
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1000	1000	900	700	500	300	300	200	200	200	200	300	800	1000	1000	(IM)	600	1000
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	700	1400	1500	( )	1500
15	1600	1600	1900	2200	1900	1700	2400	2700	2500	2100	1300	1900	500	(IM)	(IM)	(IM)	100	600	1300	1700	1900	2100	2100	2100	1700	2700
16	1900	1900	2100	1900	1800	1800	1900	1800	1600	1800	1700	1600	1400	1300	1400	1000	800	800	700	800	1700	1800	1700	1700	1600	2100
17	1700	1700	1700	1700	1700	1700	1800	1800	1800	1800	1800	1900	1800	1800	1600	1400	1300	1400	1400	1400	1500	1700	1700	1700	1700	1900
18	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	(IM)	(IM)	(CA)	800	800	800	800	800	800	1000	(IM)	(IM)	(IM)	(IM)	1400	1700
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1900	900	900	900	900	900	900	900	900	900	1400	1700	(IM)	(IM)	(IM)	1100	1900
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	1400	1800	2300	1800	1500	1500	1500	1500	1500	1500	1500	(IM)	(IM)	(IM)	( )	2300
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	1700	1900	2100	2200	2300	2300	2300	2400	2500	2600	( )	2600
22	2700	2900	2900	2900	2900	2900	3100	3300	3400	3700	3800	3700	3500	3500	3500	3300	3300	3300	3200	3200	3200	3200	3200	3200	3200	3800
23	3200	3100	3100	3100	3100	3100	3200	3400	3500	3500	3500	3500	3500	3500	3300	3400	3300	3200	3200	3200	3200	3100	3100	3200	3300	3500
24	2900	2500	2400	2400	2400	2400	2400	2500	2300	1800	2200	2300	(IM)	1300	1400	2100	2600	2900	3100	3300	3300	3400	3500	3700	2600	3700
25	3800	3900	3900	3900	4000	4000	4100	4200	(CA)	(CA)	(CA)	(CA)	(CA)	1500	1500	1500	1500	1500	1900	2700	3200	3200	3300	3300	3000	4200
26	3400	3500	3500	3500	3700	3700	3800	3900	4200	2100	1900	1900	1900	1900	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	3100	4200
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	100	100	100	100	100	100	100	100	100	100	100	200	200	100	100	200
28	200	200	100	100	100	200	200	100	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
29	500	300	200	300	300	300	300	200	300	200	300	300	200	200	200	200	300	200	300	200	300	300	300	300	300	500
30	300	300	300	300	300	300	300	300	300	200	300	300	200	200	200	200	200	200	200	200	200	300	300	300	300	300
31	300	300	300	300	300	200	300	300	200	200	200	200	300	200	200	200	200	200	200	200	200	200	300	200	300	300
AV	1700	1700	1700	1700	1700	1700	1800	1800	1600	1400	1200	1300	1100	1100	1100	1100	1000	1000	1100	1300	1400	1500	1500	1600	1300	
PK	3800	3900	3900	3900	4000	4000	4100	4200	4200	3700	3800	3700	3500	3500	3500	3400	3300	3300	3200	3300	3300	3400	3500	3700		4200

PARTICULATE DATA 24-HOUR AVERAGE (UG/M3)
CB-TRACT
OCCIDENTAL OIL SHALE INC.

MO	DY	YR	TRL20	TRL23	TRL42	TRL56
7	2	78	15.0	14.7	13.3	13.0
7	5	78	24.6	25.2	42.7	22.1
7	8	78	27.1	19.1	21.5	18.4
7	11	78	10.1	21.8	20.3	19.2
7	14	78	23.9	26.7	18.9	21.9
7	17	78	18.3	14.2	33.6	14.8
7	20	78	19.9	22.3	31.0	10.5
7	23	78	21.1	18.8	23.8	15.8
7	26	78	33.7	32.2	23.6	23.9
7	29	78	24.0	22.3	21.0	19.6
		AV	21.8	21.7	25.0	17.9
		GM	20.8	21.1	23.8	17.4
		PK	33.7	32.2	42.7	23.9

WIND SPEED
METERS / SEC

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	3	3	2	3	3	3	3	4	3	3	2	1	2	1	1	3	4
7	1	1	1	1	1	2	2	1	1	2	1	4	3	3	4	5	5	4	3	1	1	1	2	2	2	5
8	2	2	3	3	3	2	2	2	2	5	4	4	4	5	4	5	3	4	3	1	2	1	2	2	3	5
9	2	2	2	2	2	2	3	1	2	1	4	4	4	4	5	3	3	3	3	1	2	2	3	2	3	5
10	1	1	1	2	1	2	2	3	3	5	3	4	4	4	2	2	3	3	2	2	4	4	4	4	3	5
11	3	3	3	3	4	4	2	3	4	4	4	4	6	5	6	8	4	4	4	3	4	4	4	3	4	8
12	2	2	2	2	2	2	3	2	3	5	4	4	4	5	4	4	4	3	3	2	2	2	2	2	3	5
13	3	3	2	3	3	2	2	2	4	3	4	4	4	5	3	4	3	2	4	2	2	2	2	3	3	5
14	2	3	2	2	3	2	2	1	2	3	3	3	2	3	4	4	4	3	3	2	3	2	1	2	2	4
15	2	3	2	3	5	6	4	4	4	4	4	5	4	4	4	8	4	7	7	5	3	2	2	2	4	8
16	4	3	3	4	4	5	3	3	3	3	5	5	4	5	5	4	4	3	4	4	3	3	4	4	4	5
17	4	4	2	2	3	2	3	3	3	3	4	4	4	5	5	5	5	3	5	4	3	7	3	3	4	7
18	2	2	2	4	4	4	3	2	2	3	3	3	4	4	2	4	2	1	2	4	2	2	1	3	3	4
19	2	2	1	3	4	2	3	3	3	4	4	4	4	5	3	4	4	3	3	2	2	2	2	2	3	5
20	3	2	2	2	2	3	3	1	4	5	4	4	5	5	5	4	5	4	3	1	2	2	1	2	3	5
21	2	1	1	1	1	1	2	4	3	2	2	4	4	6	6	5	6	6	4	2	1	1	1	1	3	6
22	1	1	1	1	1	2	1	1	2	2	3	3	3	2	3	3	3	2	3	2	1	2	1	2	2	3
23	2	2	2	2	2	2	1	1	1	1	2	3	3	1	2	3	2	2	3	2	2	1	1	2	2	3
24	2	2	2	2	2	2	4	3	2	2	3	2	3	4	5	4	3	4	2	2	2	2	2	3	3	5
25	3	3	3	3	2	3	5	3	2	2	1	3	4	3	4	3	2	2	2	2	7	2	2	2	3	7
26	2	1	2	2	2	2	3	2	1	3	3	4	3	4	4	3	3	3	2	2	1	2	2	1	2	4
27	1	2	1	2	3	2	1	1	2	2	2	2	3	2	3	3	2	2	2	2	3	3	2	3	2	3
28	2	2	3	2	2	2	3	2	1	3	2	3	4	4	4	2	2	4	5	1	2	1	2	1	3	5
29	1	3	3	1	1	1	1	2	1	0	1	3	4	4	4	3	2	1	1	2	1	3	2	1	2	4
30	1	1	1	2	1	1	1	1	1	1	3	3	4	3	4	2	3	2	2	2	2	2	1	2	2	4
31	2	2	2	1	2	1	1	1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	2
AV	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	4	3	3	2	2	2	2	2	3	
PK	4	4	3	4	5	6	5	4	4	5	5	5	6	6	6	8	6	7	7	5	7	7	4	4		8

WIND SPEED @10M
METERS / SEC

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	1	2	2	2	1	1	1	2	2	4	6	7	6	6	5	4	6	5	3	3	3	2	1	1	3	7
2	2	4	1	1	1	1	2	5	6	5	7	7	8	8	8	10	7	8	8	4	4	3	2	1	4	10
3	2	4	4	4	6	2	2	5	7	5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	7
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	1	2	4	6	5	5	6	6	4	4	4	3	3	3	2	4	6
6	2	2	3	1	2	2	1	1	3	2	4	3	5	5	4	4	6	7	6	4	3	4	2	2	3	7
7	1	2	1	1	1	1	1	1	2	2	5	6	6	6	5	7	10	8	6	5	4	5	4	4	4	10
8	4	5	2	3	4	4	3	3	5	6	9	8	7	8	6	8	5	7	6	5	5	4	2	2	5	9
9	3	1	1	1	1	1	2	1	3	5	6	8	7	6	6	5	6	7	7	6	3	3	3	2	4	8
10	1	1	1	2	1	2	1	4	7	8	6	7	8	5	3	5	5	5	2	6	11	8	5	4	4	11
11	4	3	3	2	3	3	2	3	8	8	6	6	8	8	9	10	6	4	4	2	2	3	4	4	5	10
12	2	2	1	2	2	2	2	5	7	6	6	5	7	5	6	5	5	5	5	4	3	1	2	2	4	7
13	1	1	1	2	3	2	1	2	3	4	5	5	5	4	4	6	6	5	3	2	3	2	1	1	3	6
14	1	1	1	1	1	2	1	1	1	2	2	2	4	4	2	2	3	4	3	3	3	3	2	0	2	4
15	0	1	2	2	3	2	3	5	5	6	6	8	7	7	5	8	6	5	8	5	4	3	3	3	4	8
16	3	2	2	3	2	3	2	2	4	5	7	8	8	8	6	7	5	5	8	6	3	8	7	8	5	8
17	5	4	4	4	2	2	1	4	5	4	6	5	6	6	6	7	5	5	4	4	4	2	8	6	4	8
18	4	2	2	2	2	3	3	4	4	4	5	4	6	7	6	7	9	7	6	4	2	2	2	2	4	9
19	2	1	1	2	4	4	4	3	6	7	7	6	7	6	4	7	5	8	8	6	9	6	3	4	5	9
20	3	3	2	3	2	2	2	5	8	7	8	7	9	10	7	6	9	8	8	6	5	5	5	4	6	10
21	7	1	2	3	4	3	4	4	3	3	2	6	5	6	6	6	5	7	7	6	4	7	6	7	5	7
22	4	3	1	2	2	1	1	1	1	2	4	3	3	4	4	3	5	4	5	3	1	1	2	2	3	5
23	1	1	1	1	2	1	1	1	2	3	4	4	5	4	4	3	4	4	4	2	1	2	2	1	2	5
24	1	2	1	2	3	2	2	3	4	4	3	4	4	3	5	4	5	5	4	3	1	1	2	2	3	5
25	1	2	2	2	2	2	3	5	4	3	3	4	3	4	5	4	5	7	3	4	10	4	2	1	4	10
26	2	1	0	2	0	1	1	1	2	2	4	4	5	6	5	4	5	4	6	3	3	2	1	1	3	6
27	1	1	1	2	2	2	2	3	4	3	3	4	4	3	5	3	3	4	2	2	4	4	3	3	3	5
28	3	3	1	2	1	2	1	1	5	5	4	5	6	4	4	4	2	6	4	2	2	3	2	2	3	6
29	4	6	3	1	1	2	1	3	2	2	2	4	7	4	3	3	4	2	3	3	2	5	3	1	3	7
30	0	1	1	2	1	1	1	1	1	2	2	4	4	3	5	3	4	4	3	2	4	2	1	2	2	5
31	2	3	2	2	2	1	2	2	3	3	4	5	4	4	7	7	3	3	3	3	2	4	3	3	3	7
AV	3	2	2	2	2	2	2	3	4	4	5	5	6	5	5	5	5	5	5	4	4	4	3	3	4	
PK	7	6	4	4	6	4	4	5	8	8	9	8	9	10	9	10	10	8	8	6	11	8	8	8		11

WIND SPEED @30M
METERS / SEC

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	1	1	2	2	1	1	1	2	2	3	5	6	5	5	6	4	5	5	4	3	4	3	1	3	3	6
2	4	5	2	1	1	0	1	5	6	5	6	7	7	8	8	9	7	7	6	5	5	4	4	3	5	9
3	3	4	4	6	7	2	2	5	6	5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	7
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	1	2	5	7	5	5	6	4	4	4	4	4	4	4	2	4	7
6	2	2	2	1	1	2	2	1	2	2	3	3	5	5	4	3	(RF)	4	(RF)	4	2	4	2	2	3	5
7	1	2	1	0	1	1	1	1	1	2	5	2	5	6	5	8	9	8	6	6	5	6	5	6	4	8
8	5	6	2	5	6	5	3	2	4	6	8	6	7	7	6	5	5	7	6	6	6	5	2	2	5	8
9	3	1	1	1	1	1	1	1	3	4	7	7	7	7	6	4	6	7	7	6	4	3	3	2	4	7
10	1	1	1	2	1	1	1	4	6	7	6	7	6	5	2	5	5	5	3	6	10	10	6	4	4	10
11	5	4	3	3	3	3	2	3	8	8	6	6	9	7	7	9	6	4	4	2	2	4	4	4	5	9
12	3	1	1	3	1	2	2	5	7	7	6	5	7	6	5	5	4	4	5	4	5	1	2	3	4	7
13	1	0	1	1	2	2	1	2	3	4	5	5	4	6	5	4	4	4	3	3	2	2	1	1	3	6
14	1	1	1	2	1	1	1	1	1	2	3	3	3	4	3	3	5	3	4	4	3	4	3	0	2	5
15	1	2	9	3	5	3	3	3	4	4	5	5	7	7	5	8	4	5	9	7	4	4	3	3	5	9
16	4	3	2	4	3	3	2	1	3	4	6	7	7	7	7	5	5	5	8	7	4	7	7	7	5	8
17	5	4	4	3	3	3	2	4	5	4	5	5	5	7	5	5	5	4	5	4	5	7	7	6	5	7
18	4	2	2	3	3	3	3	3	4	4	5	4	5	6	9	8	8	7	5	4	3	3	1	2	4	9
19	2	1	2	2	4	5	4	3	5	6	5	5	7	6	5	6	5	6	7	5	8	6	6	4	5	8
20	4	3	3	4	2	1	2	6	8	5	9	7	8	10	8	5	6	8	8	6	7	6	4	4	6	10
21	7	2	2	3	3	4	4	4	3	3	3	5	6	6	6	6	6	7	7	5	4	2	4	3	4	7
22	3	3	1	2	2	1	1	1	1	2	3	2	3	3	3	3	4	4	4	3	2	1	1	1	2	4
23	1	1	1	0	1	1	1	1	2	3	4	3	4	4	3	2	3	4	4	2	1	2	1	1	2	4
24	1	2	2	2	3	2	2	2	4	4	3	3	3	4	5	4	4	5	4	3	1	1	1	1	3	5
25	1	2	1	1	2	3	3	4	4	2	3	3	3	4	4	3	3	9	3	4	8	4	3	1	3	9
26	2	1	0	1	0	0	0	1	1	2	3	5	4	5	4	4	5	4	5	4	3	3	1	1	3	5
27	1	1	1	2	2	2	2	3	4	2	2	2	3	3	4	3	3	4	2	2	4	5	3	4	3	5
28	3	3	1	2	1	2	1	1	4	4	4	4	6	5	4	3	2	6	4	4	2	2	2	4	3	6
29	4	6	3	1	1	2	1	3	2	1	2	2	5	4	3	3	4	2	3	3	1	5	3	2	3	6
30	0	1	1	2	1	1	1	0	1	1	2	2	3	4	4	2	3	4	4	2	4	3	2	2	2	4
31	2	2	2	2	3	2	2	2	3	2	4	6	4	4	6	7	4	3	3	3	2	4	3	3	3	7
AV	3	2	2	2	2	2	2	3	4	4	4	4	5	5	5	5	5	5	5	4	4	4	3	3	4	
PK	7	6	9	6	7	5	4	6	8	8	9	7	9	10	9	9	8	9	9	7	10	10	7	7		10

WIND SPEED @60M
METERS / SEC

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	1	1	1	2	1	1	2	2	3	6	6	5	6	4	5	5	5	4	4	4	3	2	5	4	6
2	6	6	4	3	1	1	2	5	6	6	7	8	8	9	9	9	8	8	7	6	5	4	4	5	6	9
3	4	6	7	8	8	3	2	5	6	6	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	8
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	1	2	5	6	5	4	6	5	4	4	4	5	6	4	3	4	6
6	3	1	1	1	2	1	1	1	2	2	3	3	5	5	5	4	6	6	7	6	2	4	2	3	3	7
7	2	2	1	0	1	1	1	1	2	2	5	6	6	6	5	7	8	7	6	7	7	8	6	7	4	8
8	7	8	3	7	8	7	4	3	4	7	9	8	7	7	7	7	6	7	7	7	8	6	2	2	6	9
9	3	1	1	1	0	1	2	1	3	5	6	8	7	7	6	4	6	7	8	8	5	3	4	2	4	8
10	1	1	1	1	1	1	1	4	8	7	5	7	7	5	3	6	6	5	4	6	11	9	6	5	4	11
11	6	4	4	4	4	3	2	4	8	8	6	7	9	8	8	10	7	4	4	2	3	4	5	6	5	10
12	3	1	2	4	3	2	1	6	8	5	6	6	7	5	5	5	4	4	5	5	6	2	1	1	4	8
13	1	1	1	2	2	1	1	2	3	4	5	5	5	5	4	5	5	3	3	3	2	2	1	1	3	5
14	1	1	2	2	0	1	1	1	1	2	3	2	3	4	3	3	4	4	4	4	4	4	3	1	2	4
15	1	2	3	3	4	3	2	4	4	5	4	5	7	8	6	8	6	6	9	5	4	4	4	3	4	9
16	4	4	3	3	4	2	2	1	4	4	6	7	7	7	7	6	5	5	8	8	3	8	8	7	5	8
17	6	5	4	3	4	3	1	4	6	5	5	5	5	6	5	7	5	5	5	5	5	7	8	7	5	8
18	5	3	3	2	2	3	3	3	4	4	4	3	6	5	6	8	8	7	5	5	3	3	1	2	4	8
19	3	2	3	3	5	6	4	3	5	8	6	6	5	5	5	6	6	6	8	7	6	8	2	4	5	8
20	4	3	4	4	2	1	3	5	9	9	9	7	7	9	8	5	7	8	8	7	8	8	5	4	6	9
21	8	2	2	4	3	4	4	4	3	3	4	5	6	6	6	5	8	7	8	5	3	2	4	3	4	8
22	3	2	1	1	1	1	0	1	1	2	3	2	3	3	3	3	4	4	4	4	2	1	1	1	2	4
23	1	1	1	0	1	1	2	1	2	2	4	4	4	4	3	2	3	4	4	3	2	2	2	1	2	4
24	1	2	2	1	4	2	2	2	4	4	4	3	3	3	5	4	4	5	4	3	2	1	1	1	3	5
25	0	2	1	2	2	2	4	4	4	2	2	4	4	4	4	3	3	5	3	4	8	4	4	1	3	8
26	2	1	0	0	0	0	0	1	1	3	4	5	4	4	4	4	4	4	5	4	3	3	2	0	3	5
27	1	1	1	3	2	2	3	3	3	2	2	3	3	3	4	2	3	4	2	2	4	6	4	4	3	6
28	4	4	1	1	2	2	0	2	4	4	4	4	6	5	4	3	2	3	5	4	2	3	1	3	3	6
29	5	3	4	1	1	2	1	3	2	1	2	3	5	3	3	2	4	2	3	3	3	5	4	2	3	5
30	1	1	1	2	1	1	1	1	1	1	2	3	3	4	4	3	4	4	4	2	4	4	3	1	2	4
31	2	1	1	2	2	2	2	2	2	3	5	5	5	4	7	4	4	3	4	3	2	4	3	4	3	7
AV	3	3	2	2	3	2	2	3	4	4	4	5	5	5	5	5	5	5	5	5	4	4	3	3	4	
PK	8	8	7	8	8	7	4	6	9	9	9	8	9	9	9	10	8	8	9	8	11	9	8	7		11

DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
MRI STATION = 042 PERIOD(7/01/78 TO 7/31/78)

HOUR

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	1	1	1	2	2	2	2	4	6	6	5	5	5	6	5	5	4	3	2	2	3	3	3
2	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	3	3	6	7	7	7	10	11	9	10	9	8	7	6	4	3	3	3	4	5
4	1	2	2	2	2	2	2	4	6	6	7	7	7	8	7	7	6	5	4	3	2	2	2	2	4
5	2	2	2	2	2	2	1	1	1	2	3	5	6	5	6	5	5	4	4	4	3	3	3	3	3
6	3	1	1	1	2	2	2	2	2	2	3	3	4	5	5	5	5	6	5	3	3	2	2	2	3
7	1	1	2	2	2	1	1	2	2	3	4	6	6	5	6	7	8	7	6	5	5	3	3	3	4
8	3	2	2	2	3	3	2	2	5	8	8	7	7	7	8	6	6	6	5	5	4	3	2	2	5
9	3	2	2	2	2	2	2	2	2	3	6	7	6	7	6	4	6	6	6	4	3	3	2	2	4
10	2	2	2	2	2	2	3	7	7	6	6	7	6	3	4	5	5	3	4	7	9	5	4	3	4
11	4	5	4	4	4	3	4	3	5	7	6	8	8	8	9	8	5	9	3	3	3	4	4	2	5
12	2	2	2	2	2	2	2	3	6	5	5	6	6	5	5	5	9	5	9	4	2	3	2	4	4
13	1	2	2	2	2	2	2	2	3	4	5	5	5	5	5	4	3	3	2	2	2	2	2	2	3
14	2	2	2	2	2	2	1	1	1	2	3	3	4	4	4	4	4	4	4	3	2	1	1	1	2
15	2	2	2	3	3	3	3	4	5	6	6	6	7	7	8	8	5	8	6	4	3	3	3	4	5
16	3	3	4	4	3	2	3	3	3	5	7	6	7	6	6	6	6	4	5	4	6	5	4	4	5
17	5	4	3	3	3	2	3	3	4	5	6	5	7	6	6	6	4	4	4	4	5	6	3	2	4
18	2	3	3	3	3	3	3	3	4	4	4	5	6	6	6	7	5	5	6	4	2	2	3	4	4
19	1	1	3	3	3	3	3	5	7	6	6	6	5	6	5	6	6	7	4	4	4	3	3	4	4
20	4	3	3	2	2	3	3	4	7	8	8	7	9	8	6	6	7	7	6	5	5	4	3	3	5
21	2	2	2	3	4	4	4	3	2	3	4	5	6	7	7	7	7	7	5	3	2	2	2	2	4
22	2	2	2	2	2	2	3	3	3	3	4	4	4	4	2	2	1	1	1	2	2	2	1	1	2
23	1	1	1	1	2	3	3	4	4	4	4	3	3	3	3	2	1	2	2	2	2	2	3	3	2
24	3	2	***	***	***	***	***	***	3	4	4	4	4	4	6	4	4	4	3	2	2	2	2	3	3
25	3	2	2	2	2	2	3	3	3	3	3	3	4	4	5	4	3	4	3	4	5	3	2	2	3
26	2	2	2	2	2	1	1	1	2	2	4	4	4	5	5	4	3	4	4	3	3	1	1	4	3
27	1	1	2	2	2	2	2	2	2	2	2	3	3	4	3	3	3	2	2	4	4	3	3	3	2
28	3	2	2	2	2	2	2	2	4	4	4	4	5	6	4	3	3	5	3	2	2	2	2	2	3
29	3	4	3	2	1	1	1	2	3	2	2	3	5	4	4	3	3	3	3	2	3	5	3	1	3
30	1	1	3	2	1	1	1	1	2	2	3	4	4	4	3	3	4	4	3	3	3	3	3	3	3
31	3	2	2	2	2	2	2	2	2	2	8	6	4	3	6	4	3	4	3	2	2	2	3	4	3
MEAN	2	2	2	2	2	2	2	3	4	4	5	5	6	5	5	5	5	5	4	3	3	3	3	3	3

TOTAL NUMBER OF OBSERVATIONS = 738

NOTE: **** = MISSING DATA

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                     DIURNAL VALUES OF WIN[illegible]SPEED AT 10 METERS(MPS)
                     MRI STATION = 056 PERIOD( 7/01/78 TO  7/31/78)

                                          HOUR
DAY    1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24   MEAN

  1  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  2  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  3  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  4  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  5  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  6  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  7  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  8  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
  9  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 10  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 11  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 12  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 13  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 14  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 15  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 16  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 17  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 18  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 19  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 20  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 21  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 22  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 23  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 24  *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
 25  *** *** *** *** *** *** *** *** ***   2   2   3   3   3   3   3   2   2   2   3   3   2   2   2      2
 26    2   2   1   1   1   2   2   2   2   2   3   3   3   3   4   4   3   3   2   2   2   2   2   2      2
 27    2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2   3   2   2      2
 28    2   2   2   2   2   2   2   2   2   2   2   3   3   4   3   3   2   2   3   2   2   2   1   1      2
 29    2   2   2   1   1   1   1   1   1   1   2   2   3   4   3   3   2   1   1   2   2   2   2   2      2
 30    1   1   1   1   1   1   1   1   2   2   3   3   3   3   3   3   3   3   2   2   2   2   2   0      2
 31    1   1   2   2   2   2   2   2   2   2   3   4   4   3   4   3   2   2   2   2   2   2   2   2      2

MEAN   2   2   2   2   2   2   2   2   2   2   3   3   3   3   3   3   2   2   2   2   2   2   2   2      2


                           TOTAL NUMBER OF OBSERVATIONS = 159

   NOTE: **** = MISSING DATA
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WIND DIRECTION
DEGS

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(RF)	(RF)	265	275	305	285	260	255	225	215	200	215	350	75	75	(VA)	50	262
7	80	75	65	70	80	80	80	70	265	80	115	165	140	140	160	170	160	190	180	185	75	70	70	75	110
8	70	70	75	80	85	70	50	65	215	235	215	240	235	200	215	215	200	195	185	165	95	75	85	70	139
9	100	100	105	105	95	90	100	115	285	280	230	230	230	239	250	265	275	200	220	215	90	60	110	90	162
10	80	85	90	95	95	85	105	95	130	175	160	195	180	265	330	230	175	190	355	160	135	105	100	110	128
11	103	115	105	110	105	105	90	115	140	167	183	165	170	185	185	245	115	115	95	110	115	135	115	95	129
12	20	95	95	97	97	97	95	110	235	185	187	245	225	190	185	200	170	170	190	125	80	77	67	67	136
13	80	95	88	115	125	95	110	110	195	283	200	185	245	230	200	177	140	145	270	27	85	87	85	81	132
14	85	85	80	75	80	90	71	42	290	275	275	235	5	5	140	180	50	80	70	65	80	80	75	72	70
15	77	95	67	87	125	125	120	115	95	183	170	170	180	210	260	275	285	91	87	77	80	70	75	67	112
16	91	95	80	110	125	130	115	105	110	100	170	175	190	170	210	240	245	230	305	325	55	110	95	105	131
17	87	100	112	110	112	112	110	87	200	185	230	247	195	290	275	290	350	87	110	110	95	108	112	105	123
18	105	75	95	105	120	115	120	80	130	190	190	185	145	195	195	225	(VA)	345	180	265	10	40	45	75	126
19	90	70	70	75	105	85	105	90	120	195	195	220	210	275	290	240	225	185	160	125	100	90	65	110	130
20	110	95	100	95	85	80	80	70	225	180	165	180	210	210	215	205	215	185	190	155	90	85	90	85	140
21	70	90	85	(VA)	70	70	290	260	275	265	245	280	310	275	280	280	275	310	310	350	120	(VA)	35	80	315
22	70	70	65	70	80	80	110	75	290	270	265	245	270	245	275	275	250	270	295	350	55	100	90	100	14
23	95	100	95	90	90	90	85	95	90	345	(VA)	(VA)	(VA)	(VA)	(VA)	265	265	305	330	10	85	75	70	70	68
24	80	90	75	75	95	95	120	115	145	225	990	990	990	990	105	100	110	120	110	100	100	100	100	120	110
25	105	120	100	115	100	110	120	110	125	85	105	250	250	310	275	(VA)	290	105	120	85	245	100	30	70	107
26	75	75	75	80	75	65	100	85	70	270	290	325	285	285	295	290	310	10	20	10	85	115	115	100	41
27	90	110	90	95	95	90	75	305	90	125	100	290	265	230	275	130	115	80	120	85	85	80	80	100	97
28	90	70	110	115	100	85	105	125	100	275	125	130	150	165	350	350	105	145	100	100	105	95	80	100	104
29	80	45	90	75	90	70	75	70	60	(VA)	130	215	215	80	105	105	(VA)	115	105	5	35	290	90	45	81
30	70	70	75	105	90	85	85	80	285	280	265	285	270	290	310	275	290	295	345	35	80	80	65	60	20
31	95	85	95	75	80	85	95	90	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )
PV	84	87	87	93	96	91	96	91	158	222	199	226	226	235	242	234	221	158	141	75	85	86	81	84	108

WIND DIRECTION @10M
DEGS

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	60	75	105	105	(VA)	(VA)	90	90	60	210	195	185	210	180	210	230	210	225	240	215	205	200	10	170	175
2	195	180	290	10	45	75	60	170	180	175	195	210	215	200	205	200	210	210	225	205	195	200	190	185	194
3	180	195	195	190	185	45	75	160	180	200	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	295	40	(VA)	340	220	165	195	215	220	200	210	220	205	200	275	5	230	226
6	(VA)	205	215	150	165	140	65	25	5	355	330	330	225	230	225	260	205	205	220	200	220	0	345	290	240
7	240	210	65	25	285	90	75	0	40	65	210	200	185	180	200	190	200	215	210	210	190	135	190	185	187
8	190	190	270	195	195	190	100	(VA)	215	220	220	200	220	210	215	220	215	200	200	200	190	200	(VA)	220	205
9	285	175	(VA)	185	270	(VA)	120	75	220	205	220	200	210	210	245	240	210	205	205	200	120	50	175	10	202
10	120	160	215	110	185	200	70	165	190	185	185	200	205	250	315	210	190	200	240	195	180	165	125	120	182
11	140	125	115	105	100	90	80	175	185	185	185	175	190	200	200	250	170	150	140	120	135	15	135	160	150
12	225	125	85	195	165	315	20	210	205	220	215	225	215	210	210	210	195	220	190	180	190	20	100	120	193
13	180	80	350	130	165	260	115	50	55	215	200	200	225	245	230	175	190	205	240	225	210	205	195	280	201
14	235	120	355	255	110	175	0	355	310	340	0	10	25	55	50	330	75	60	40	80	135	140	190	270	34
15	55	125	145	145	115	100	80	115	180	190	190	210	200	220	240	285	355	130	135	125	120	140	135	105	144
16	90	90	85	95	95	80	65	75	200	190	190	200	210	200	195	225	220	215	250	345	320	150	160	135	159
17	125	110	120	110	120	100	90	170	220	215	225	215	225	260	275	235	330	255	110	110	135	150	160	155	165
18	175	160	90	90	105	90	120	180	195	205	195	210	180	205	215	220	210	220	235	265	190	135	195	125	179
19	180	215	310	110	130	165	145	105	175	180	210	215	215	280	290	250	215	185	195	205	180	170	90	75	186
20	130	95	110	105	55	85	155	205	200	195	205	200	235	235	215	215	225	225	210	205	205	195	265	240	194
21	190	320	285	260	280	280	310	300	320	350	290	330	0	315	295	315	325	325	335	15	80	255	275	260	306
22	230	230	250	225	215	195	35	335	315	355	310	325	290	305	265	350	315	305	335	350	260	170	165	280	287
23	145	275	110	200	265	225	305	25	335	210	225	185	230	215	195	255	320	45	20	90	175	185	260	140	220
24	325	175	230	310	160	80	70	290	195	235	220	250	305	5	125	130	150	155	160	145	205	125	160	160	177
25	155	185	65	75	100	110	135	195	195	290	285	305	240	310	0	275	310	170	165	290	225	215	260	345	233
26	130	265	245	125	305	345	115	290	325	315	345	340	340	325	0	345	10	10	25	50	95	120	255	355	348
27	350	195	195	150	115	175	125	155	160	205	215	265	315	290	210	115	90	175	95	235	200	205	280	190	187
28	190	210	125	135	195	290	85	260	230	320	260	170	175	230	345	20	40	10	190	250	185	190	255	340	222
29	230	150	155	155	185	285	285	120	120	265	355	270	215	145	120	100	20	75	155	170	335	10	110	245	163
30	195	345	345	225	315	245	310	295	300	355	280	310	315	320	350	20	320	0	0	75	165	185	160	340	316
31	85	105	120	110	110	130	120	65	155	255	235	265	230	315	220	185	265	290	275	345	155	330	35	150	174
PV	172	164	141	141	153	136	82	137	204	229	234	231	227	240	234	235	232	207	205	190	181	175	183	192	198

WIND DIRECTION @30M
DEGS

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	265	50	105	120	85	90	105	95	80	210	200	185	205	180	210	220	215	210	230	220	200	202	170	195	177
2	195	195	195	195	140	150	110	170	180	185	205	210	210	210	210	195	215	215	230	215	195	200	165	180	192
3	165	190	190	190	190	95	95	155	185	190	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	290	70	(VA)	325	215	185	205	195	210	205	200	230	215	205	255	355	275	227
6	(VA)	215	240	200	180	155	95	45	345	335	335	270	235	230	205	240	215	205	225	205	260	0	5	325	244
7	260	220	150	(CM)	(CM)	110	95	30	45	70	190	205	185	185	195	190	205	215	205	215	190	187	190	190	194
8	190	190	220	195	200	195	225	30	215	225	215	200	205	215	220	215	205	215	200	200	195	195	230	240	209
9	285	175	160	175	85	100	115	90	215	205	225	200	210	230	245	245	215	205	210	200	180	70	170	345	191
10	200	165	230	70	140	195	110	160	195	185	190	205	200	270	290	200	200	200	225	200	180	165	125	135	196
11	145	135	115	115	105	110	90	175	190	190	185	185	185	205	200	255	175	150	135	130	135	60	140	160	153
12	275	75	(VA)	195	170	255	20	205	195	205	200	230	225	225	225	200	220	215	205	190	190	(VA)	95	105	202
13	110	120	285	195	155	250	165	65	(VA)	215	200	215	230	250	240	195	195	195	230	220	230	190	130	345	203
14	(VA)	75	95	75	120	(CM)	115	0	280	345	0	0	330	160	225	315	250	60	40	40	115	120	150	135	66
15	125	135	145	145	120	110	90	115	185	185	205	190	195	210	245	265	290	145	135	130	125	145	140	120	155
16	110	115	110	115	140	120	85	120	195	195	175	205	195	195	190	210	230	210	230	310	280	150	150	135	169
17	125	120	115	120	135	120	110	175	205	215	215	215	200	250	245	245	310	135	110	120	140	140	160	155	162
18	175	180	120	120	110	115	160	185	190	190	195	215	205	205	205	205	205	215	230	260	185	140	225	160	184
19	145	180	280	130	125	155	140	105	175	180	205	230	205	250	285	240	205	195	190	195	180	165	205	90	185
20	125	210	120	105	210	145	105	190	180	195	190	195	215	225	220	225	215	210	200	200	195	190	225	235	192
21	190	295	290	260	275	275	295	290	285	345	255	275	340	295	295	300	315	305	310	350	45	230	270	270	291
22	250	245	275	235	235	215	70	350	315	5	340	310	335	20	295	5	285	295	315	325	335	120	180	340	308
23	200	220	155	155	220	245	275	355	325	215	220	170	215	215	180	225	260	10	5	15	95	155	195	195	213
24	275	135	140	150	170	130	80	130	200	230	185	170	275	320	100	135	110	155	160	155	225	135	115	175	158
25	155	145	90	95	140	115	170	180	190	245	145	225	240	315	330	255	235	160	165	185	215	200	255	65	184
26	120	200	325	180	65	85	185	240	320	230	325	340	340	325	335	330	330	350	20	45	90	120	125	120	8
27	50	90	105	145	135	120	150	155	165	225	110	250	310	170	125	115	90	145	90	230	205	210	280	190	151
28	185	200	140	145	225	220	95	125	230	280	135	165	185	220	340	25	15	240	215	255	160	160	275	20	194
29	235	165	145	160	130	295	280	120	85	215	10	270	175	135	105	70	15	70	150	155	190	5	100	240	144
30	130	120	185	130	340	120	170	285	290	320	280	295	320	315	340	0	335	340	10	60	135	160	150	145	340
31	85	105	120	105	105	135	120	90	190	220	240	265	240	165	220	200	225	280	290	340	130	335	40	130	165
PV	174	160	155	149	148	145	119	129	205	219	212	223	224	225	232	229	232	203	207	203	178	162	169	165	188

WIND DIRECTION 060M
DEGS

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	200	320	95	165	90	115	140	110	80	220	210	195	205	200	220	230	230	215	240	235	215	220	200	205	195
2	210	205	190	195	190	195	175	180	185	195	200	220	220	215	215	200	215	220	230	220	210	215	185	180	203
3	185	190	195	200	190	255	105	170	180	200	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	270	65	(VA)	320	215	185	210	220	225	215	210	235	225	220	255	355	300	237
6	(VA)	210	290	285	185	165	115	50	345	330	335	285	240	230	210	250	220	220	220	220	285	5	5	340	263
7	285	250	220	(VA)	95	120	115	15	50	60	200	215	185	195	200	200	205	215	215	225	205	195	200	195	195
8	190	195	210	210	220	205	215	(VA)	230	230	225	210	220	230	230	215	215	215	205	205	205	210	255	250	217
9	280	200	230	200	160	350	140	120	220	215	230	215	220	225	255	245	230	210	215	210	205	80	165	345	213
10	200	165	210	40	130	190	160	165	200	195	190	215	205	285	285	215	210	210	215	205	190	185	135	140	193
11	150	140	140	135	130	120	130	180	195	200	195	200	185	210	205	255	185	155	140	155	160	(VA)	115	160	166
12	270	(VA)	185	195	190	230	20	210	205	210	210	235	230	230	225	230	215	215	205	200	205	195	85	110	209
13	85	135	255	240	165	230	185	110	(VA)	220	200	220	235	260	240	195	200	210	250	240	260	245	190	30	215
14	110	130	110	165	25	25	105	375	280	0	345	355	355	165	235	345	255	80	50	70	105	120	135	130	72
15	150	145	115	160	120	125	120	130	180	205	200	200	210	225	195	290	270	145	120	100	140	155	170	150	162
16	130	130	140	140	150	145	110	150	210	210	195	205	225	200	210	220	230	215	240	315	270	165	165	145	185
17	135	130	130	135	150	135	125	190	220	235	220	240	215	265	260	255	315	130	125	130	155	155	170	165	175
18	185	180	155	135	135	140	170	190	195	205	215	230	210	215	220	225	215	220	245	270	210	170	230	175	198
19	145	245	290	170	130	155	155	140	195	205	215	230	215	235	295	250	225	195	205	215	190	170	125	40	197
20	125	100	125	125	225	170	205	200	200	210	215	200	235	235	225	235	215	230	215	220	215	210	260	250	206
21	200	280	305	275	295	300	310	295	305	330	270	315	350	300	295	310	320	320	335	5	75	270	320	300	307
22	275	280	290	270	270	240	120	15	345	345	335	295	320	355	265	0	315	310	325	350	35	100	190	215	311
23	350	250	180	140	275	265	255	20	140	235	230	160	220	260	210	265	290	45	10	20	75	165	255	280	247
24	275	135	165	200	190	150	110	225	215	240	210	245	280	345	125	140	165	165	160	165	230	275	350	200	196
25	260	165	205	225	165	135	170	195	200	295	120	250	305	5	320	280	320	170	175	150	230	185	210	25	211
26	85	150	290	290	140	135	335	270	320	315	325	355	335	305	0	340	5	15	20	50	85	110	115	10	2
27	345	120	145	165	160	160	170	155	175	255	230	255	335	300	215	130	105	255	105	245	225	220	275	205	199
28	200	215	160	150	175	225	175	245	240	310	205	185	185	230	340	20	10	330	220	320	155	155	225	15	216
29	275	165	140	145	145	295	40	100	100	80	345	250	230	135	120	105	350	75	155	155	185	5	85	40	115
30	240	330	55	210	285	160	250	280	280	320	290	310	340	305	350	25	325	345	10	65	130	160	175	180	303
31	190	150	140	125	125	140	130	90	195	210	230	270	265	340	220	200	245	260	310	350	120	335	50	120	185
PV	199	179	178	180	165	172	145	165	207	238	230	235	238	246	237	241	244	212	213	211	188	186	180	176	208

DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
MRI STATION = 042 PERIOD(7/01/78 TO 7/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	94	96	109	72	69	107	112	89	69	92	228	245	232	243	227	218	245	216	250	245	198	106	99	109	150
2	92	90	101	116	101	102	84	87	173	202	202	219	212	218	212	227	228	216	238	222	186	63	99	93	159
3	110	89	91	78	88	87	348	113	185	192	215	192	213	233	189	202	255	208	265	238	198	94	111	91	162
4	94	114	49	86	90	79	82	163	200	216	229	198	241	199	223	206	201	241	233	248	195	86	92	101	167
5	198	70	100	99	79	77	93	82	353	346	34	201	241	222	159	229	265	216	224	239	203	66	329	208	168
6	287	209	64	72	86	61	112	113	296	326	292	228	145	265	255	228	214	237	263	229	264	317	157	312	247
7	53	209	95	80	95	107	90	81	250	58	333	162	213	187	192	183	202	226	225	231	206	190	54	73	155
8	70	93	79	92	99	93	53	85	241	272	250	204	231	249	237	272	247	190	217	214	196	36	102	67	170
9	48	169	83	108	92	93	143	292	342	16	238	256	187	231	231	248	276	226	225	224	199	23	134	113	194
10	140	111	18	94	65	128	108	62	206	193	241	200	241	336	329	264	176	227	203	154	174	135	131	114	157
11	137	145	128	101	90	98	156	159	214	213	195	187	177	215	218	268	147	155	128	123	102	122	146	79	151
12	308	145	92	103	36	81	80	327	217	209	235	250	261	241	266	262	192	194	204	184	65	104	94	89	176
13	98	94	79	93	93	90	69	72	44	299	162	256	246	214	271	225	218	186	254	278	178	79	89	76	132
14	118	86	95	48	88	108	101	296	194	322	289	290	346	94	94	28	52	52	58	73	132	112	57	89	71
15	68	108	88	88	98	98	77	107	152	182	246	207	208	227	263	267	276	131	132	128	107	141	129	94	136
16	100	101	106	100	91	88	94	111	175	210	208	204	220	211	231	241	229	238	250	349	267	135	109	89	163
17	110	105	91	78	116	62	93	146	264	271	270	255	246	340	244	245	43	82	109	95	128	136	195	125	126
18	143	126	97	108	109	87	81	196	209	249	201	199	141	238	205	245	208	243	228	282	187	123	126	123	172
19	99	92	306	85	131	49	61	105	198	214	203	271	201	286	320	239	218	192	203	202	170	89	111	44	165
20	136	64	153	151	85	84	82	235	212	211	200	163	257	231	224	255	236	215	226	209	200	188	333	132	192
21	205	222	214	316	268	282	295	311	299	278	344	315	301	319	313	289	326	328	336	10	41	355	274	308	305
22	249	318	87	338	121	349	301	91	285	87	321	325	311	328	326	39	128	52	64	61	93	134	76	82	29
23	85	82	261	51	32	174	170	165	265	234	236	195	315	57	13	72	292	92	54	88	158	109	110	111	107
24	91	93	85	63	***	***	***	***	217	206	184	224	263	325	127	120	173	148	151	133	102	110	86	89	132
25	69	81	69	83	80	82	75	59	195	207	117	66	286	291	296	257	117	144	207	173	269	135	136	155	122
26	91	273	91	77	90	87	69	39	301	327	290	342	318	310	340	349	334	21	55	52	118	128	37	63	27
27	67	88	102	84	73	89	47	80	86	205	41	70	309	28	171	237	159	116	320	292	210	214	34	39	80
28	77	92	94	95	102	100	103	89	40	309	132	174	209	178	323	28	58	347	126	305	163	194	319	121	97
29	278	209	116	200	79	112	93	174	90	131	262	63	324	164	74	102	15	20	137	171	127	273	116	152	124
30	187	119	57	80	100	116	63	231	228	258	245	313	60	264	289	345	270	341	23	18	134	107	111	103	74
31	97	93	101	101	106	336	98	78	32	140	281	282	285	105	211	195	193	301	321	332	144	300	87	148	105
MEAN	102	110	91	86	91	88	86	103	224	232	239	227	247	247	247	246	223	202	214	213	166	113	99	98	167

TOTAL NUMBER OF OBSERVATIONS = 740

NOTE: **** = MISSING DATA

DIURNAL VALUES OF WIND RECTION AT 10 METERS(DEG)
MRI STATION = 056 PERIOD(7/01/78 TO 7/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
4	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
5	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
7	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
8	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
23	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
25	***	***	***	***	***	***	***	***	***	248	57	75	317	127	356	115	333	122	169	114	280	184	114	153	118
26	132	126	137	116	117	114	89	79	92	341	341	336	349	341	300	346	344	350	48	89	181	128	144	161	74
27	188	187	96	206	148	138	137	79	46	223	212	307	337	338	350	82	106	81	89	106	120	139	136	128	121
28	139	117	146	183	135	112	85	55	91	320	326	196	191	110	333	331	77	306	141	229	142	84	159	180	129
29	111	118	100	120	114	154	127	81	101	78	84	84	337	191	56	96	148	343	153	107	127	326	210	193	112
30	106	88	171	76	119	134	77	92	31	323	315	309	343	324	297	55	310	330	334	122	131	141	130	129	64
31	141	141	156	131	170	140	144	80	126	100	331	329	327	344	101	177	179	216	235	320	103	227	221	181	157
MEAN	135	128	134	137	133	132	109	77	81	320	347	342	329	360	352	71	58	347	132	112	140	149	157	160	96

TOTAL NUMBER OF OBSERVATIONS = 159

NOTE: **** = MISSING DATA

TEMPERATURE
DEG. C

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
7	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
8	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
9	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
10	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
11	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
12	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
13	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
14	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
15	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
16	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
17	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
16	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
19	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
20	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
21	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
22	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
23	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
24	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
25	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
26	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
27	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
28	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
29	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
30	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
31	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )		( )

TEMPERATURE @10M
DEG. C

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	14	13	13	14	12	13	14	18	20	23	24	24	24	25	26	26	26	25	24	23	20	18	18	18	20	26
2	18	18	17	16	16	14	16	22	23	24	25	25	26	27	27	27	27	27	26	23	20	19	18	17	22	27
3	17	17	17	17	18	14	16	19	22	22	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	22
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	14	16	18	22	23	24	24	24	25	24	24	23	21	18	18	17	16	21	25
6	14	13	12	11	11	9	11	14	16	18	20	22	23	23	23	23	24	23	23	20	17	17	16	14	17	24
7	13	12	12	10	10	9	11	15	20	22	23	25	25	26	27	27	28	27	26	24	22	22	20	21	20	28
8	19	19	17	17	17	16	17	21	23	23	24	24	26	26	27	27	27	26	25	24	22	20	18	19	22	27
9	17	17	16	16	16	16	17	19	21	22	23	25	26	27	27	27	27	27	26	23	20	19	17	17	21	27
10	17	17	17	15	17	14	17	21	23	23	24	26	26	25	25	27	26	25	24	23	19	17	16	16	21	27
11	15	14	14	14	14	16	17	18	19	21	20	21	22	24	24	23	18	22	22	19	17	18	17	17	19	24
12	17	16	16	16	16	16	17	20	22	23	23	25	26	26	26	27	27	26	26	24	21	19	18	18	21	27
13	18	18	16	16	17	15	16	19	24	26	26	27	28	28	29	29	29	29	29	27	24	22	21	18	23	29
14	18	18	18	17	16	16	16	19	23	26	28	29	29	30	31	31	31	30	29	28	25	23	22	22	24	31
15	22	21	21	21	19	19	20	23	25	26	26	27	28	28	27	27	24	23	21	20	19	18	17	17	22	28
16	15	16	16	15	16	16	18	22	23	24	24	24	26	26	27	27	28	27	24	20	18	18	18	18	21	28
17	17	16	16	16	16	15	16	18	21	23	24	25	26	25	27	27	21	17	16	17	17	17	16	15	19	27
18	14	14	13	12	12	12	14	18	19	21	22	23	24	25	25	26	26	25	24	22	21	20	18	18	19	26
19	18	17	16	15	15	16	17	21	23	24	25	26	27	26	24	26	27	27	25	24	23	21	19	19	22	27
20	19	18	16	16	17	18	20	22	24	24	25	27	27	28	28	28	28	28	27	25	22	23	22	23	23	28
21	23	21	20	17	15	13	13	14	15	17	19	21	22	23	23	23	24	23	22	20	18	16	14	12	19	24
22	11	10	9	8	8	7	8	12	14	17	20	22	22	24	24	25	25	25	24	23	21	20	18	17	17	25
23	14	14	15	14	13	13	14	17	21	23	24	25	26	26	26	27	27	27	26	25	23	22	18	18	21	27
24	17	17	17	16	17	15	17	21	23	24	25	26	27	27	27	26	25	25	25	24	22	21	21	22	22	27
25	20	20	18	18	17	16	18	22	23	25	26	27	28	29	29	29	30	27	27	25	25	23	22	20	23	30
26	18	19	18	18	17	17	17	19	22	25	26	27	27	28	29	29	29	28	28	26	24	22	21	19	23	29
27	18	18	20	20	18	17	20	23	24	26	28	29	29	30	30	30	29	29	28	27	24	21	21	22	24	30
28	21	20	19	20	19	19	19	22	23	23	23	23	26	26	26	27	27	25	23	22	21	20	19	16	22	27
29	17	16	16	17	16	13	14	16	18	21	23	24	(IM)	(IM)	(IM)	23	24	24	23	21	18	18	17	16	19	24
30	15	15	13	14	13	13	13	15	17	20	22	24	24	26	26	27	27	26	25	24	22	19	19	18	20	27
31	17	17	18	17	17	18	18	19	22	24	25	26	24	22	23	24	24	24	24	22	20	18	17	15	21	26
AV	17	17	16	16	15	14	16	19	21	23	24	25	26	26	26	27	26	26	24	23	21	19	18	18	21	
PK	23	21	21	21	19	19	20	23	25	26	28	29	29	30	31	31	31	30	29	28	25	23	22	23		31

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 042 PERIOD(7/01/78 TO 7/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	11	9	8	8	7	7	10	16	20	24	26	26	27	27	29	28	28	28	28	27	22	16	13	11	19
2	11	10	9	10	8	8	11	17	23	26	27	27	28	28	28	28	28	28	28	27	21	16	13	11	20
3	11	9	8	9	8	8	12	19	22	23	23	24	27	27	28	28	28	28	28	26	23	15	13	11	19
4	9	9	8	8	6	6	8	17	20	21	22	22	23	24	24	24	24	24	24	23	20	12	10	8	17
5	7	6	5	3	2	2	4	10	17	19	21	25	26	26	26	27	27	27	26	24	20	16	17	17	17
6	16	12	11	7	5	4	7	12	17	19	20	22	24	25	24	24	25	25	25	23	20	17	16	16	17
7	12	10	6	6	5	4	6	12	19	23	24	27	27	28	28	29	29	29	28	27	23	20	15	13	19
8	12	11	11	11	10	10	11	18	23	24	26	26	27	28	28	28	29	28	28	27	22	19	15	13	20
9	13	13	10	9	8	8	12	16	19	21	24	26	28	29	28	29	28	28	28	27	23	21	19	16	20
10	16	13	12	12	12	11	13	19	23	24	27	28	28	24	28	29	28	26	24	23	19	18	17	16	20
11	14	14	13	13	13	13	17	19	22	22	21	22	23	25	26	24	19	23	22	20	18	17	18	17	19
12	17	14	11	11	11	11	15	19	23	24	25	27	27	28	28	28	28	28	28	26	19	17	14	12	20
13	11	8	8	8	7	6	11	17	24	27	28	29	29	29	30	31	29	31	29	28	23	17	14	13	20
14	12	11	9	8	8	8	11	17	24	28	29	31	32	33	33	34	33	31	31	29	25	21	16	15	22
15	13	13	12	12	13	13	17	23	25	28	29	28	29	29	28	26	25	24	20	20	19	18	17	14	21
16	14	14	13	13	13	14	17	22	27	27	26	26	28	28	28	28	29	28	25	21	19	18	17	17	21
17	17	16	14	14	14	14	15	19	23	24	25	27	28	23	27	28	20	17	14	14	14	17	16	14	19
18	12	11	11	10	9	8	13	17	20	23	24	26	27	27	26	27	27	26	25	23	21	19	17	17	19
19	16	16	13	13	13	12	14	20	24	25	28	27	28	27	24	28	29	27	26	24	24	20	19	19	22
20	19	17	17	14	14	14	17	23	24	26	27	28	28	29	30	30	30	29	29	26	24	22	19	19	23
21	17	20	18	17	14	12	12	13	15	18	20	21	22	23	23	24	24	23	23	19	17	15	12	12	18
22	11	8	6	4	3	19	21	23	24	26	26	27	27	26	25	23	19	16	12	10	9	8	7	6	16
23	6	6	11	17	22	26	28	28	28	29	30	30	28	29	28	24	20	16	13	11	10	12	8	8	20
24	8	11	14	21	***	***	***	***	23	26	27	28	28	29	26	27	27	26	27	26	20	16	13	12	22
25	11	10	10	11	10	9	12	18	23	26	28	28	30	30	32	32	33	31	29	28	27	26	22	19	22
26	16	14	11	11	10	8	10	16	22	25	26	28	28	29	29	29	30	29	29	28	23	21	16	13	21
27	12	11	11	9	9	11	11	17	24	28	29	32	32	32	32	33	33	32	29	28	27	24	19	21	23
28	17	16	16	16	16	14	14	19	23	24	24	24	29	29	26	28	28	27	22	22	21	19	16	13	21
29	14	17	15	15	14	11	11	14	17	22	24	27	25	17	19	24	25	24	24	22	19	17	15	14	19
30	13	10	10	9	9	8	8	13	18	19	23	24	26	28	29	28	28	28	27	27	23	19	17	14	19
31	14	12	12	11	11	12	12	17	20	26	28	27	26	23	25	26	26	26	25	23	19	18	17	16	20
MEAN	13	12	11	11	10	10	13	18	22	24	25	26	27	27	27	28	27	26	25	24	20	18	15	14	20

TOTAL NUMBER OF OBSERVATIONS = 740

NOT **** = MISSING DATA

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 056 PERIOD(7/01/78 TO 7/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
4	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
5	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
7	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
8	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
23	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
25	***	***	***	***	***	***	***	***	***	29	29	31	32	32	33	35	33	31	31	28	27	26	26	27	30
26	18	19	10	9	7	7	8	13	21	24	28	28	30	31	31	32	32	32	30	27	23	17	14	11	21
27	10	9	8	7	7	7	8	16	23	31	32	33	33	33	34	34	33	31	29	25	23	19	15	16	22
28	13	15	15	15	12	11	12	16	21	23	25	26	27	28	24	28	28	23	23	22	18	16	15	12	20
29	9	11	14	13	11	9	9	12	14	24	26	29	24	17	20	24	27	25	25	22	18	16	13	13	18
30	10	9	8	8	7	6	6	11	15	20	20	24	26	28	27	29	28	28	28	24	19	16	14	11	18
31	9	8	7	7	7	7	9	16	17	23	28	28	28	26	22	28	27	28	28	27	22	19	17	15	19
MEAN	12	12	10	10	9	8	9	14	19	25	27	28	29	28	27	30	30	28	28	25	21	18	16	15	20

TOTAL NUMBER OF OBSERVATIONS = 159

NOTE: **** = MISSING DATA

DELTA TEMPERATURE 60-10 M
DEG. C*100

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	303	328	345	328	231	178	156	-22	-47	-50	-72	-75	-56	-72	-36	-69	-44	-39	-25	75	300	250	206	381	103	381
2	381	381	328	153	150	214	250	-25	-47	-72	-69	-50	-50	-56	-31	-50	-36	-6	-11	56	314	389	325	389	119	339
3	489	373	256	261	183	222	111	-50	-72	-56	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	489
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	-50	-36	-42	-75	-72	-100	-72	-72	-42	-56	-33	-28	78	195	128	26	28	-13	195
6	33	211	239	139	117	300	125	-28	-69	-75	-95	-78	-75	-39	-50	-67	-56	-56	-50	-22	139	25	11	117	29	300
7	75	150	156	222	200	234	106	-33	-55	-56	-61	-75	-95	-81	-111	-75	-17	-19	-22	50	217	172	250	275	59	275
8	278	275	181	334	345	225	167	-44	-44	6	6	-56	-39	-39	-36	-56	-56	-44	-28	114	256	356	239	147	103	356
9	195	89	220	150	228	178	150	19	-33	-61	-31	-53	-56	-28	14	-56	-39	-33	-22	53	128	64	272	156	63	272
10	111	33	206	186	78	289	164	-56	-44	-72	-78	-47	-92	-95	-67	-83	-72	-33	-25	-6	-28	-25	-8	14	11	289
11	22	6	11	58	50	39	-25	-42	-44	-64	-42	-53	-78	-75	-50	-83	-36	-39	-25	6	78	56	111	111	-4	111
12	89	136	106	83	72	145	78	-28	-44	-64	-64	-58	-75	-53	-72	-67	-64	-53	-33	83	256	206	289	270	47	289
13	261	175	267	178	217	389	220	33	-64	-89	-75	-72	-75	-50	-50	-78	-78	-53	-31	97	206	300	242	300	91	389
14	158	200	175	239	311	345	222	-22	-50	-72	-86	-56	-81	-64	-86	-72	-83	-50	-28	67	89	122	197	172	64	345
15	192	145	214	111	275	208	133	0	-44	-50	-86	-61	-69	-19	-39	22	-11	-64	-39	-19	-25	64	50	106	41	275
16	200	122	175	247	272	203	78	-31	-39	-47	-56	-44	-39	-72	-69	-42	-42	-31	-28	22	22	31	22	-3	36	272
17	11	33	31	47	81	86	36	-61	-56	-50	-83	-67	-83	-6	-53	-17	-64	67	120	67	23	-11	-3	47	4	120
18	64	53	150	172	167	128	42	-31	-47	-61	-72	-81	-78	-61	-47	-42	-44	-36	-28	6	-14	117	239	145	27	239
19	114	131	139	181	181	183	67	-42	-69	-61	-64	-81	-67	-44	-17	-8	-58	-61	-33	6	6	69	56	100	26	183
20	114	100	111	231	278	117	58	-39	-31	-36	-47	-92	-50	-6	-28	-39	-14	-6	0	67	259	222	250	89	63	278
21	47	39	64	25	14	-6	-50	-47	-67	-72	-83	-100	-106	-17	-28	-72	-81	-72	-31	6	31	103	92	89	-13	103
22	117	150	86	100	97	156	36	-47	-53	-53	-89	-78	-78	-106	-78	-92	-117	-64	-28	33	83	117	234	214	23	234
23	272	211	125	228	284	183	67	-22	-58	-78	-69	-92	-75	-72	-67	-78	-72	-64	-28	33	133	164	314	275	63	314
24	275	106	211	361	175	214	147	-28	-47	-69	-78	-61	-50	-50	-81	-53	-19	-25	36	86	172	222	200	222	78	361
25	133	133	225	183	175	189	75	-44	-69	-78	-86	-83	-114	-95	-83	-72	-83	-36	-11	42	-8	78	75	139	24	225
26	150	153	228	220	172	220	228	19	-50	-72	-78	-122	-122	-89	-103	-103	-72	-64	-31	58	139	175	170	231	52	231
27	261	250	125	106	111	197	86	-36	-53	-47	-72	-103	-81	-78	-83	-50	-47	-28	-17	97	239	284	203	200	61	284
28	267	264	228	253	192	181	122	-31	-47	-36	-28	-72	-81	-86	-95	-92	-50	-8	106	47	167	170	225	206	75	267
29	97	86	33	67	139	136	78	8	-31	-44	72	-78	-14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	42	139
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
31	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	175	161	172	180	177	191	108	-28	-51	-58	-62	-73	-73	-58	-58	-59	-54	-37	-13	46	130	148	165	170	47	
PK	489	381	345	361	345	389	250	33	-31	6	72	-44	-14	-6	14	22	-11	67	120	114	314	389	325	389		489

REL HUMIDITY
PERCENT

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	57	62	63	63	64	70	69	56	42	35	22	18	17	17	16	14	14	13	13	16	30	34	33	31	36	70
2	29	29	28	26	30	37	40	33	20	18	15	14	14	12	11	11	11	10	10	10	15	20	21	21	20	40
3	24	24	25	24	24	23	28	25	19	17	16	15	11	10	9	9	9	9	9	10	14	22	24	24	18	28
4	17	18	19	18	18	19	22	19	17	15	14	12	12	11	11	11	11	11	11	11	14	19	20	20	15	22
5	23	27	30	34	35	41	46	42	35	30	26	21	14	13	13	12	12	12	12	13	18	24	25	31	25	46
6	39	43	50	59	63	64	66	59	48	40	36	32	28	19	17	17	19	17	17	17	20	26	40	48	37	66
7	55	62	72	75	77	78	80	65	52	42	28	25	16	14	14	14	14	11	11	11	12	12	14	15	36	80
8	18	20	20	22	23	24	26	28	27	30	22	19	16	15	14	13	13	12	12	12	12	14	16	18	19	30
9	22	24	25	27	32	35	41	50	54	56	47	42	38	32	27	22	22	24	21	21	23	26	32	39	33	56
10	48	47	48	48	51	52	54	61	59	53	47	43	40	33	29	30	32	30	29	32	35	35	42	62	43	62
11	71	71	70	72	76	78	78	76	71	62	58	54	52	55	52	40	38	35	62	49	49	50	56	60	60	78
12	59	60	64	70	75	76	75	75	74	60	42	37	31	30	32	19	17	16	15	15	15	15	16	19	42	76
13	23	24	25	25	25	27	27	28	32	32	32	25	23	20	19	12	15	15	15	15	15	23	27	30	23	32
14	31	31	33	33	34	34	35	38	39	51	37	23	19	18	16	16	15	15	16	17	20	24	28	30	27	51
15	30	32	36	37	37	37	38	38	37	35	33	31	32	29	29	28	30	32	42	53	59	61	65	68	40	68
16	72	74	75	76	77	77	74	65	52	54	41	42	44	36	35	33	32	30	33	37	62	79	79	75	56	79
17	72	78	80	82	82	82	83	77	60	52	47	41	34	33	30	27	27	44	82	82	78	71	68	73	62	83
18	77	81	82	86	81	81	82	76	59	50	44	39	35	32	30	30	23	25	25	27	34	38	42	47	51	86
19	49	49	53	54	82	76	74	66	49	40	35	31	27	27	24	31	29	25	27	30	32	27	34	41	42	82
20	44	47	48	55	61	62	63	62	49	39	34	30	27	33	24	20	20	20	20	16	15	18	20	21	35	63
21	24	26	27	29	36	60	79	85	83	60	48	40	36	26	25	22	19	16	16	25	39	46	55	61	41	85
22	62	71	75	79	85	92	89	74	62	52	39	29	24	21	19	19	19	19	19	20	23	28	33	34	45	92
23	38	40	42	42	45	47	47	39	36	28	22	21	20	19	19	19	18	17	17	15	16	21	23	25	28	47
24	26	29	31	34	37	39	42	43	39	35	31	28	24	22	25	27	28	28	28	30	34	37	41	41	32	43
25	41	41	40	44	45	48	52	49	43	40	45	32	23	20	18	18	17	25	20	24	30	27	31	34	34	52
26	40	43	46	47	49	50	50	47	41	32	28	23	20	19	19	17	17	17	17	20	20	25	30	31	31	50
27	33	36	38	38	38	41	45	45	39	34	27	21	18	15	15	17	19	20	20	22	25	29	35	37	29	45
28	40	41	44	45	47	50	54	54	46	47	43	46	39	37	36	36	36	38	53	60	65	66	69	77	49	77
29	77	80	85	85	85	85	91	84	75	55	45	37	41	92	85	60	44	42	45	56	62	72	83	86	69	92
30	85	89	89	94	93	93	90	78	65	53	42	30	23	19	16	16	15	15	17	19	26	32	36	39	49	94
31	41	42	44	43	44	44	44	40	40	31	26	27	24	28	37	32	30	30	30	31	35	42	48	58	37	58
AV	44	46	49	51	53	56	58	54	47	41	35	30	27	26	25	22	21	22	25	26	31	34	38	42	38	
PK	85	89	89	94	93	93	91	85	83	62	58	54	52	92	85	60	44	44	82	82	78	79	83	86		94

BAROMETRIC PRESS
MILLIBARS

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	789	789	788	787	787	787	786	786	785	785	786	786	786	786	786	787	789
4	787	787	787	788	788	789	789	789	790	790	790	789	789	789	789	789	789	789	789	789	789	790	790	790	789	790
5	790	790	790	790	790	790	790	790	790	790	789	789	789	789	789	788	788	788	788	787	788	789	789	790	789	790
6	790	789	789	789	790	790	790	790	791	791	791	791	789	790	790	790	790	790	790	790	790	792	792	793	790	793
7	793	793	793	793	793	793	793	793	793	793	793	792	792	792	791	790	790	790	790	790	790	790	790	790	792	793
8	790	790	790	791	791	791	792	792	792	793	793	793	793	792	792	792	792	792	791	791	791	791	792	792	792	793
9	792	792	792	792	792	793	793	793	793	793	793	793	793	792	792	792	791	791	791	791	791	791	792	792	792	793
10	792	792	792	792	792	792	792	792	792	792	792	791	790	789	788	787	786	784	783	783	783	784	784	783	789	792
11	783	782	782	782	782	781	779	778	777	776	774	774	773	780	786	787	767	786	786	786	786	787	787	787	782	787
12	787	787	787	787	787	788	788	788	789	789	789	789	789	789	788	788	788	788	788	788	789	789	789	789	788	789
13	789	789	789	789	790	790	790	791	791	791	791	791	791	790	790	790	790	790	790	790	790	791	791	791	790	791
14	791	791	790	790	791	791	791	791	791	791	792	791	791	791	791	790	790	790	790	790	790	790	790	790	791	792
15	790	790	790	790	790	791	791	791	792	792	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791	792
16	790	790	790	790	790	790	790	790	790	790	790	789	789	788	798	767	787	786	786	787	788	788	788	788	789	790
17	788	788	788	788	788	788	789	789	789	789	789	788	788	788	788	788	788	789	790	790	790	790	790	789	789	790
18	789	789	789	789	790	790	791	791	791	792	792	792	791	791	791	791	790	790	790	790	791	791	791	791	791	792
19	791	791	792	792	792	792	792	792	791	790	790	790	790	789	789	790	789	789	789	789	789	789	789	790	790	792
20	789	789	789	789	789	789	789	789	787	787	787	787	786	787	787	787	786	78	6	786	786	786	786	786	725	789
21	786	786	786	786	786	787	787	788	788	789	789	789	789	787	786	786	786	786	786	787	787	788	789	790	787	790
22	790	791	791	791	791	791	792	792	792	792	792	792	791	791	790	790	789	789	789	789	789	789	790	790	791	792
23	790	790	790	790	790	790	791	791	791	791	791	791	790	790	790	789	789	789	789	789	786	789	790	790	790	791
24	790	790	790	790	790	790	791	791	791	791	791	791	791	790	790	790	790	790	790	790	790	790	790	790	790	791
25	790	790	790	791	791	792	792	792	792	792	792	792	792	792	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	791	792
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	793	793	792	792	792	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	( )	793
27	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	790	790	790	790	790	789	789	788	788	788	787	787	788	788	789	789	789	790
28	790	790	790	790	790	791	791	791	791	792	792	792	791	791	790	790	789	789	789	790	790	790	790	791	790	792
29	792	792	791	791	791	791	792	792	792	791	791	791	791	791	791	790	790	790	790	790	790	791	791	791	791	792
30	791	791	791	791	791	791	792	792	792	792	792	792	791	791	790	790	790	789	789	789	789	790	789	789	791	792
31	789	789	789	789	789	789	789	790	790	790	789	789	789	789	789	788	788	788	788	788	788	789	789	789	789	790
AV	790	790	790	790	790	790	790	790	790	790	790	790	790	790	789	789	789	762	760	789	789	789	789	790	787	
PK	793	793	793	793	793	793	793	793	793	793	793	793	793	792	792	792	792	792	791	791	791	792	792	793		793

SOLAR RADIATION
LANGLEY

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
2	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
3	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
4	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
5	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
6	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
7	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
8	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
9	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
10	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
11	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
12	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
13	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
14	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
15	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
16	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
17	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
18	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
19	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
20	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
21	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
22	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
23	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
24	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
25	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
26	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
27	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	( )	( )
28	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	(OR)	15	16	17	36	81	80	70	60	9	6	3	1	0	0	0	0	394	81
29	0	0	0	0	0	2	9	10	35	42	55	19	9	22	73	57	8	20	3	2	0	0	0	0	366	73
30	0	0	0	0	0	4	15	30	45	58	71	77	79	75	67	55	39	24	7	0	0	0	0	0	646	79
31	0	0	0	0	0	4	18	23	46	57	28	76	16	11	48	47	18	29	8	0	0	0	0	0	429	76
TL	0	0	0	0	0	10	42	63	141	173	171	208	185	188	258	219	74	79	21	3	0	0	0	0	1835	
PK	0	0	0	0	0	4	18	30	46	58	71	77	81	80	73	60	39	29	8	2	0	0	0	0		81

PRECIPITATION
CM *100

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1																			(TR)	(TR)	(TR)	(TR)	(TR)	3	3	3
2	(TR)	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	3	(TR)	5	3
3	(TR)	(TR)	3	(TR)	(TR)	3																			5	3
4																										
5																	(TR)	(TR)	(TR)	3					3	3
6																		(TR)	(TR)	3	(TR)	(TR)	3	(TR)	5	3
7	(TR)	3																	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
8	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
9																(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	(TR)	(TR)	3	3
10	(TR)	3	(TR)	(TR)	3												(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	5	3
11	(TR)	3														(TR)	5		(TR)	(TR)	3	(TR)	3		13	5
12																				(TR)	(TR)	(TR)	(TR)	3	3	3
13	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	(TR)	(TR)	3	5	3
14	(TR)	(TR)	(TR)	(TR)	(TR)	3											(TR)	(TR)	(TR)	(TR)	3				5	3
15															(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
16	3	(TR)	(TR)	(TR)	3				(TR)	3										5	10	(TR)			23	10
17		(TR)	(TR)	3	(TR)	(TR)	3										(TR)	13							18	13
18	(TR)	(TR)	(TR)	(TR)	(TR)	3													(TR)	(TR)	(TR)	3	(TR)	(TR)	5	3
19	(TR)	3	(TR)															(TR)	(TR)	(TR)	3	(TR)	(TR)	3	8	3
20	(TR)	(TR)	3																	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
21	3	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	3	(TR)	8	3
22	(TR)	(TR)	3	(TR)	(TR)	3															(TR)	(TR)	(TR)	(TR)	5	3
23	(TR)	(TR)	(TR)	3	(TR)	(TR)									(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3	3
24	(TR)	3	(TR)	(TR)	(TR)	3								(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3					8	3
25																(TR)	(TR)	(TR)	3			(TR)	(TR)	3	5	3
26	(TR)	(TR)	3														(TR)	(TR)	(TR)	3	(TR)	(TR)	3		8	3
27																(TR)	(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	(TR)	3	3
28	3	(TR)	(TR)	(TR)	3										(TR)		5	8							18	8
29													30			(TR)						13			43	30
30																					(TR)	3			3	3
31														3											3	3
TL	8	13	10	5	13	18	13			3			30	3			10	20	3	18	18	20	13	13	218	
PK	3	3	3	3	3	3	3			3			30	3			5	13	3	5	10	13	3	3		30

PRECIPITATION
CM *100

CB-TRACT
TRAILER 23
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																				(TR)	(TR)	(TR)	(TR)	(TR)		
9	(TR)	3	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3																5	3
10																										
11																										
12																										
13																			(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
14	(TR)	(TR)	(TR)																							
15	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3								3		(TR)	3	(TR)	(TR)	(TR)	(TR)	(TR)	8	3
16	(TR)	(TR)	(TR)	(TR)	(TR)	3														3	8	8	(TR)	(TR)	20	8
17																	(TR)	13							13	13
18																										
19				3																					3	3
20																				(TR)	(TR)	(TR)	(TR)	(TR)		
21	(TR)	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	(TR)	(TR)	3	3
22	3	(TR)	(TR)	(TR)	(TR)	3																			5	3
23																										
24																										
25																										
26																			(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
27	(TR)	(TR)	(TR)	(TR)	(TR)	3																			3	3
28																		18	(TR)	(TR)					18	18
29														117	(TR)							5			122	117
30																										
31																										
TL	3	3		3		10		3	3					117		3		30	3	3	8	13			198	
PK	3	3		3		3		3	3					117		3		18	3	3	8	8				117

Evaporation Data

C-b Tract
Trailer 23
July 1978
Occidental Oil Shale, Inc.

Sample Period	Total Evaporation (cm)	Precipitation (cm)	Total Wind (km)	Max. Temp. (c)	Min. Temp. (c)
7/1-7/3	2.67		332.0	30	10
4- 5	1.85		183.8	26	5
6- 7	1.45		154.8	30	7
8- 10	3.35	.05	333.8	32.5	11
11- 12	1.67		255.6	26.5	12
13- 14	1.96		163.7	31.5	11.5
15- 17	2.32	.23	259.3	29.5	13.5
18- 19	1.54	.16	214.8	31.5	11
20- 21	1.87	.03	255.7	35	11.5
22- 24	2.33	.05	174.3	33	5
25- 26	2.02		159.2	35	12.5
27- 28	1.44	.03	83.6	35	13
29- 31	.61	1.40	160.6	35	10

MIXING HEIGHT
METERS

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	( )	30
7	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
8	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
9	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
10	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
11	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
12	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
13	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
14	30	30	30	30	30	30	30	30	30	150	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	38	150
15	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
16	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
17	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	80	30	30	30	30	30	30	30	33	80
18	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
19	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
20	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
21	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
22	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
23	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
24	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
25	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30
26	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
27	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
28	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
29	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	30
30	30	30	30	30	30	30	30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	30	30	( )	30
31	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
AV	30	30	30	30	30	30	30	30	30	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	30	30	30	30	30	30	
PK	30	30	30	30	30	30	30	30	30	150	( )	( )	( )	( )	( )	( )	80	30	30	30	30	30	30	30		150

INVERSION HEIGHT
METERS

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	120	260	420	600	370	( )	600
7	440	450	550	560	510	540	520	380	220	90	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	210	270	320	310	365	560
8	320	360	410	420	410	420	400	260	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	210	350	400	350	340	420
9	360	430	400	330	400	450	440	380	390	180	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	190	450	470	500	384	500
10	550	570	520	550	550	580	450	310	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	210	510	720	530	475	720
11	650	650	720	760	690	630	580	450	170	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	130	250	350	310	400	481	760
12	720	800	630	550	560	640	720	630	270	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	180	340	410	400	460	522	800
13	370	390	420	330	370	350	330	300	290	110	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	170	260	320	350	390	317	420
14	430	350	370	430	430	440	390	310	200	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	300	410	320	310	332	440
15	370	400	400	380	450	470	350	330	180	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	240	650	730	580	610	439	730
16	630	640	640	570	560	540	340	280	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	130	290	350	390	350	416	640
17	390	440	320	250	350	370	280	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	210	210	290	300	250	400	400	330	315	440
18	440	500	510	620	650	610	540	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	250	460	340	439	650
19	480	440	550	610	660	490	360	340	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	120	320	530	500	427	660
20	530	610	710	740	690	660	610	270	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	190	230	370	290	462	740
21	420	380	360	540	650	770	930	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	320	230	350	510	472	930
22	660	730	620	720	820	750	550	280	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	250	300	300	290	488	820
23	390	420	450	440	480	490	520	400	220	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	260	260	320	350	364	520
24	490	460	400	390	490	570	550	280	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	150	270	430	500	500	422	570
25	500	520	590	640	650	630	440	240	210	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	400	500	455	650
26	430	450	400	390	360	390	370	380	260	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	200	280	350	400	337	450
27	390	390	500	630	600	560	400	250	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	150	220	300	350	350	353	630
28	380	330	350	360	360	340	400	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	170	210	320	420	300	420
29	350	310	360	420	340	420	400	310	180	(NV)	(NV)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	420
30	270	290	300	260	260	370	360	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	250	250	( )	370
31	250	260	270	300	320	310	250	180	90	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	310	200	180	200	237	320
AV	448	463	470	488	504	512	459	316	198	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	144	253	338	396	392	397	
PK	720	800	720	760	820	770	930	630	390	180	( )	( )	( )	( )	( )	( )	210	210	290	300	650	730	720	610		930

STABILITY CLASS 0=STB 1=UNST
@50 METERS

CB-TRACT
TRAILER 20
JULY 1978
OCCIDFNTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
26	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
29	0	0	0	0	0	0	0	0	1	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
30	0	0	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	( )
31	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
PV	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0

STABILITY CLASS 0=STB 1=UNST
@200 METERS

CB-TRACT
TRAILER 20
JULY 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
8	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
9	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
10	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
11	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
19	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
21	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
23	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
26	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
27	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
28	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
29	0	0	0	0	0	0	0	0	0	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )
30	0	0	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	( )
31	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
PV	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0

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C-B PIBAL SOUNDING

SOUNDING DATE  7- 5-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                  THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0            59.5       -0.0        0.0
   0.5          29.7       62.5            58.7        2.0       11.3
   1.0          40.1       73.6            58.9        5.1       13.9
   1.5          64.6       71.5            59.6        7.1       15.2
   2.0          78.6       77.9            60.3        9.4       15.6
   2.5         118.1       82.1            61.0       12.2       16.1
   3.0         175.0       74.6            63.8       15.1       15.6
   3.5         190.6       64.3            66.8       18.3       15.2
   4.0         200.5       52.9            72.1       23.1       15.2
   4.5         203.7       48.4            76.4       27.4       15.6
   5.0         206.2       45.4            80.9       32.1       16.1
   5.5         209.5       47.8            81.2       36.2       16.5
   6.0         217.9       52.5            75.5       39.8       17.0
   6.5         236.1       57.3            64.8       42.6       17.4
   7.0         253.8       60.6            55.2       43.6       17.6
   7.5         269.3       62.3            47.9       43.5       17.5
   8.0         284.2       63.3            43.3       42.6       17.5
   8.5         301.4       62.3            38.8       41.2       17.4
   9.0         314.4       61.5            36.4       40.0       17.3
   9.5         328.9       59.7            35.5       38.3       17.2
  10.0         339.6       57.8            35.2       36.7       17.1
  10.5         347.3       55.7            35.0       35.4       17.1
  11.0         356.5       52.8            35.2       34.7       17.0
  11.5           2.2       50.7            35.7       33.2       16.9
  12.0           6.6       49.0            36.1       32.4       16.9


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        1.5        5.1
     2        0.0        5.4
     3       14.1        5.8
     4        6.2        5.9
     5        8.6        6.1
     6       16.2        6.1
     7        1.1        6.2
     8       16.8        6.3
     9       30.6        6.5
    10       34.1        6.8
    11       80.9        7.0
    12      105.7        7.2
    13      189.8        7.3
    14      216.1        7.7
    15      197.4        8.2
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16      216.7       8.8
17      264.0       9.5
18      266.3      10.3
19      329.3      11.2
20      333.3      12.0
21      333.2      12.8
22      430.9      14.3
23      389.5      15.1
24      379.2      16.0


     HEIGHT  DIRECTION   SPEED  TEMP
      FEET    DEGREES   FT/SEC DEG C

       295.    220.        2.9  11.3
       599.    276.        2.8  13.9
       809.    312.        2.3  15.2
      1033.     23.        3.6  15.6
      1293.     21.        8.3  16.1
      1522.     22.       13.3  15.6
      1727.     29.       18.8  15.2
      1970.     32.       19.4  15.2
      2191.     35.       15.4  15.6
      2418.     47.        9.5  16.1
      2707.    133.        7.6  16.5
      2972.    154.       17.7  17.0
      3209.    161.       21.6  17.4
      3461.    169.       19.2  17.6
      3700.    179.       17.1  17.5
      3919.    184.       18.9  17.5
      4155.    190.       19.7  17.4
      4408.    201.       20.8  17.3
      4655.    209.       22.0  17.2
      4851.    212.       19.8  17.1
      5021.    213.       24.3  17.1
      5456.    218.       24.7  17.0
      5558.    223.       19.6  16.9


     HEIGHT  DIRECTION   SPEED  TEMP
     METERS   DEGREES    M/SEC  DEG C

        90.    220.        0.9  11.3
       183.    276.        0.9  13.9
       247.    312.        0.7  15.2
       315.     23.        1.1  15.6
       394.     21.        2.5  16.1
       464.     22.        4.1  15.6
       526.     29.        5.7  15.2
       600.     32.        5.9  15.2
       668.     35.        4.7  15.6
       737.     47.        2.9  16.1
       825.    133.        2.3  16.5
       906.    154.        5.4  17.0
       978.    161.        6.6  17.4
      1055.    169.        5.9  17.6
      1128.    179.        5.2  17.5
      1194.    184.        5.8  17.5
      1266.    190.        6.0  17.4
      1343.    201.        6.3  17.3
      1419.    209.        6.7  17.2
      1479.    212.        6.0  17.1
      1531.    213.        7.4  17.1
      1663.    218.        7.5  17.0
      1694.    223.        6.0  16.9
```
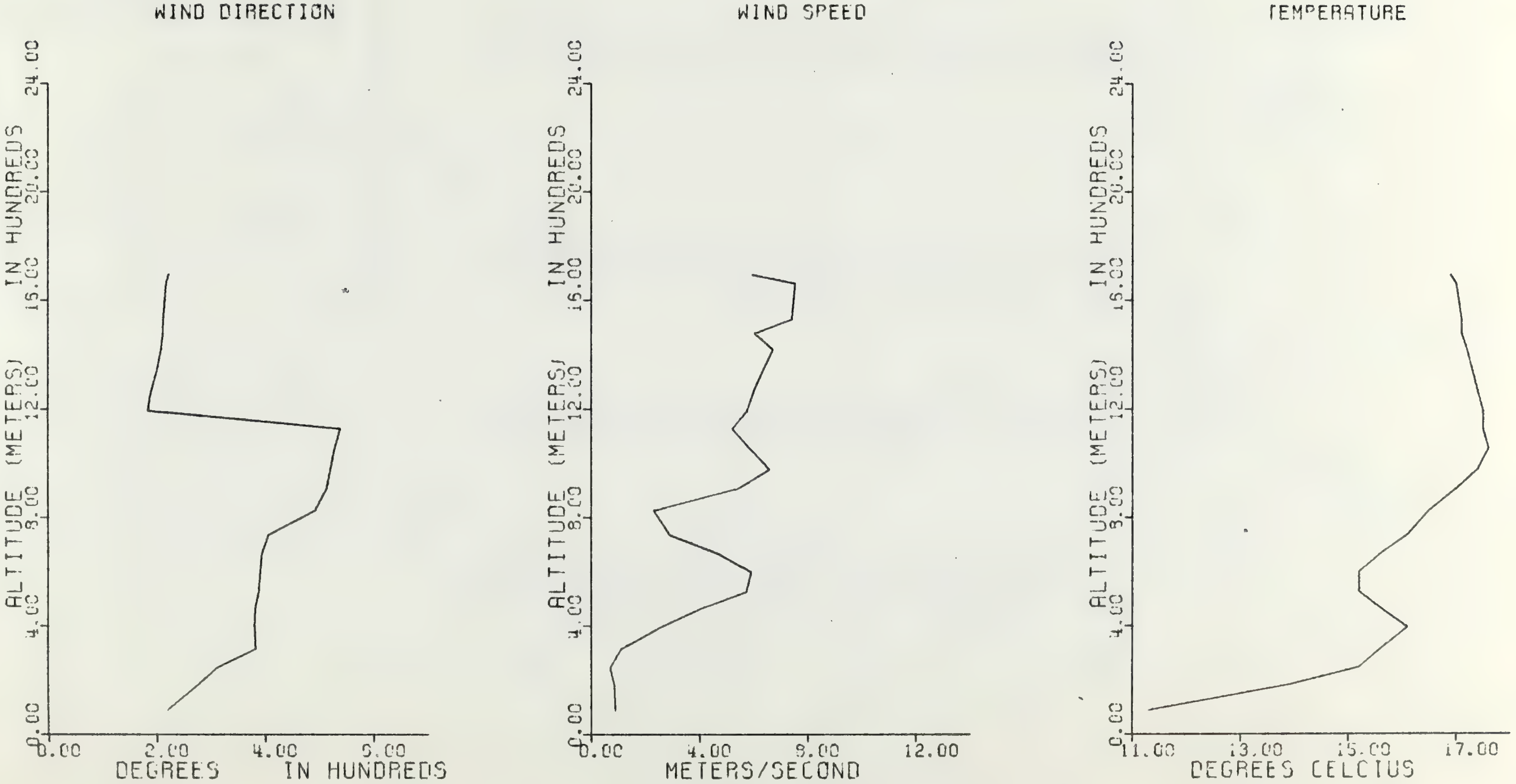

C-B PIBAL SOUNDING

TIME 645 DATE 7/5/78

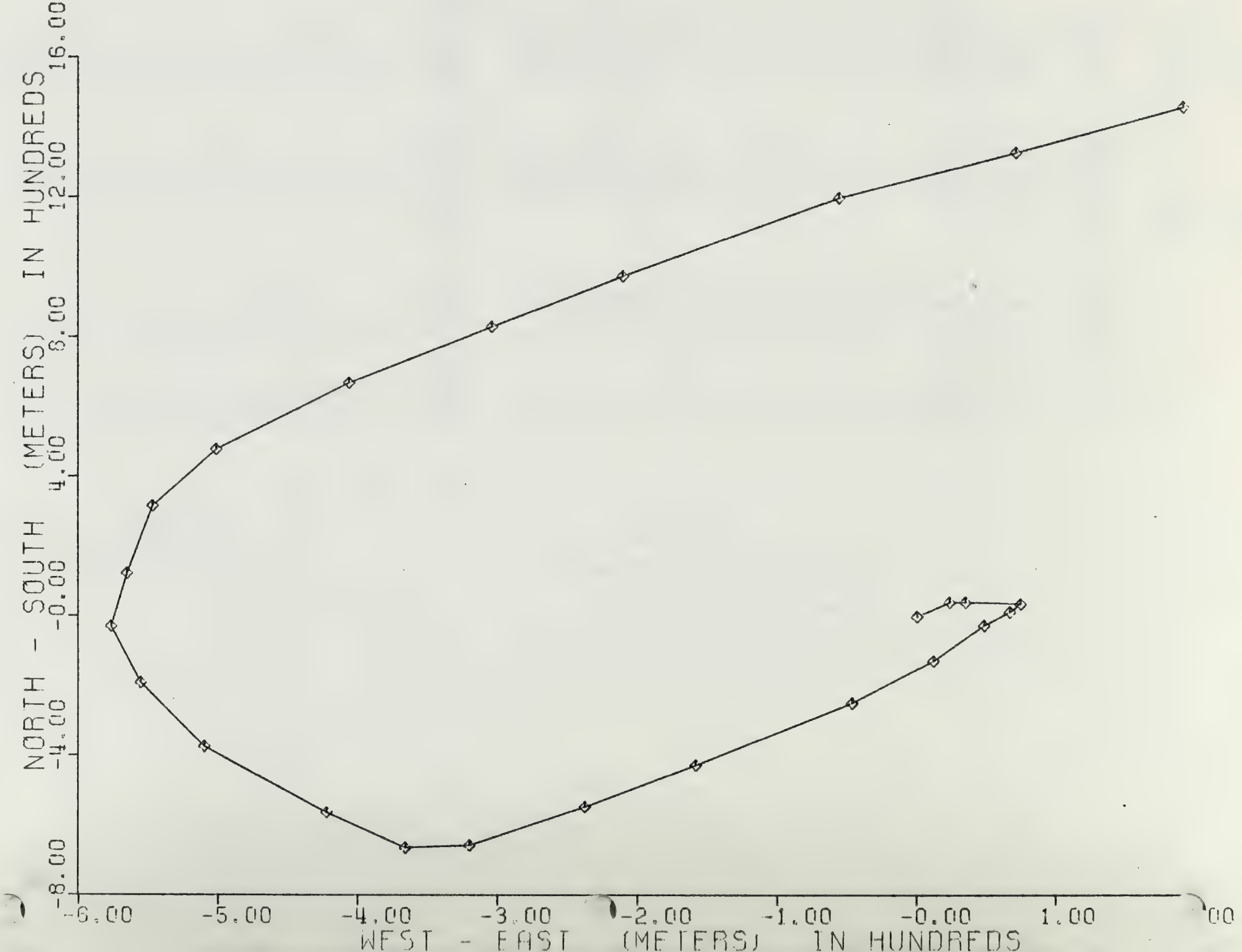


C-B PI L SOUNDING

TIME 645   DATE 7/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7- 5-73

BALLOON RELEASED 1300 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            59.5       -0.0        0.0
   0.5           11.1       28.1            56.3        1.9       28.5
   1.0          357.0       32.1            51.7        5.7       26.9
   1.5            2.3       36.4            50.8        9.5       25.3
   2.0            8.5       39.1            47.7       13.9       23.7
   2.5            8.7       39.8            44.2       16.9       22.2
   3.0            9.7       38.9            41.8       19.1       20.6
   3.5           11.3       35.8            39.9       19.5       19.0
   4.0           11.6       33.7            37.7       20.2       17.7
   4.5           11.9       33.0            36.6       21.0       16.6
   5.0           12.4       32.1            35.5       21.4       15.5
   5.5           14.1       30.6            34.8       20.9       14.4
   6.0           14.9       29.2            34.1       20.8       13.6
   6.5           15.6       28.2            33.9       20.5       13.1
   7.0           17.1       27.3            33.6       20.8       12.6
   7.5           18.2       27.3            33.5       21.1       11.6
   8.0           18.1       27.3            32.8       21.6       10.2
   8.5           17.5       27.3            31.6       22.2        8.7
   9.0           16.8       27.2            30.4       22.9        7.3
   9.5           15.1       27.9            28.6       23.6        5.9
  10.0           14.3       28.2            27.9       24.0        4.4
  10.5           13.7       28.9            26.8       24.7        3.0
  11.0           13.5       29.3            26.5       25.5        1.5
  11.5           13.0       29.9            25.9       26.0        0.0
  12.0           12.1       30.8            24.5       26.9       -1.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       50.1        5.5
     2      100.2        6.2
     3      236.7        6.9
     4      227.9        8.4
     5      169.2        9.8
     6      206.3       11.1
     7      256.6       12.5
     8      314.4       14.0
     9      387.1       15.1
    10      426.1       16.3
    11      381.5       17.7
    12      443.2       19.0
    13      475.0       19.8
    14      574.0       21.7
    15      569.0       23.2
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16      618.2        24.5
17      675.9        26.3
18      805.1        28.0
19      750.1        29.3
20      768.7        29.7
21      716.5        31.5
22      845.1        32.2
23      804.8        33.0
24      737.8        35.2

          HEIGHT   DIRECTION   SPEED   TEMP
           FEET     DEGREES   FT/SEC  DEG C

            253.      178.       16.1   28.5
            623.      179.       13.5   26.9
            993.      200.       17.4   25.3
           1672.      194.       23.0   23.7
           2259.      191.       22.6   22.2
           2765.      196.       24.4   20.6
           3053.      196.       26.9   19.0
           3422.      194.       23.4   17.7
           3732.      196.       19.8   16.6
           4025.      202.       23.9   15.5
           4251.      204.       26.1   14.4
           4475.      204.       20.1   13.6
           4550.      208.       25.3   13.1
           4974.      210.       30.6   12.6
           5358.      204.       23.8   11.6
           5731.      193.       26.1   10.2
           6222.      189.       30.2    8.7
           6730.      179.       27.4    7.3
           7249.      161.       16.4    5.9
           7427.      176.       17.5    4.4
           8081.      184.       19.6    3.0
           8454.      179.       10.7    1.5
           8810.      178.       23.2    0.0

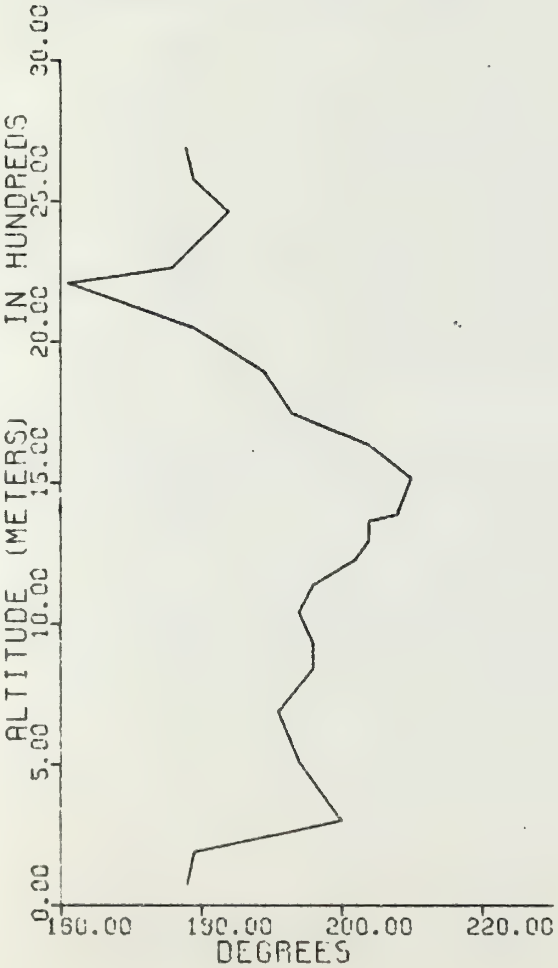

          HEIGHT   DIRECTION   SPEED   TEMP
          METERS    DEGREES   M/SEC   DEG C

             77.      178.        4.9   28.5
            190.      179.        4.1   26.9
            303.      200.        5.3   25.3
            510.      194.        7.0   23.7
            689.      191.        6.9   22.2
            843.      196.        7.4   20.6
            930.      196.        8.2   19.0
           1043.      194.        7.1   17.7
           1138.      196.        6.0   16.6
           1227.      202.        7.3   15.5
           1296.      204.        8.0   14.4
           1364.      204.        6.1   13.6
           1387.      208.        7.7   13.1
           1516.      210.        9.3   12.6
           1633.      204.        7.3   11.6
           1747.      193.        8.0   10.2
           1896.      189.        9.2    8.7
           2051.      179.        8.4    7.3
           2209.      161.        5.0    5.9
           2264.      176.        5.3    4.4
           2463.      184.        6.0    3.0
           2577.      179.        3.3    1.5
```

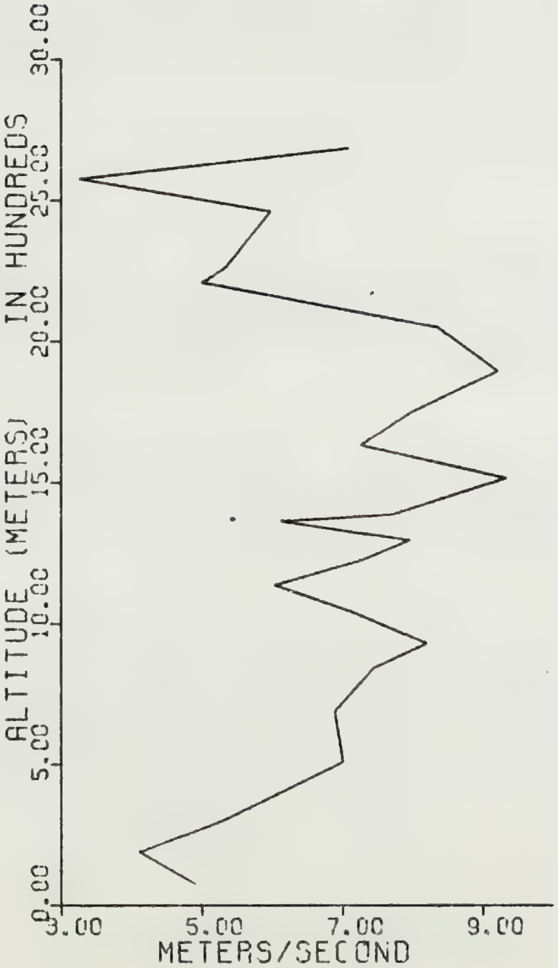
C-B PIBAL SOUNDING

TIME 1300 DATE 7/5/78

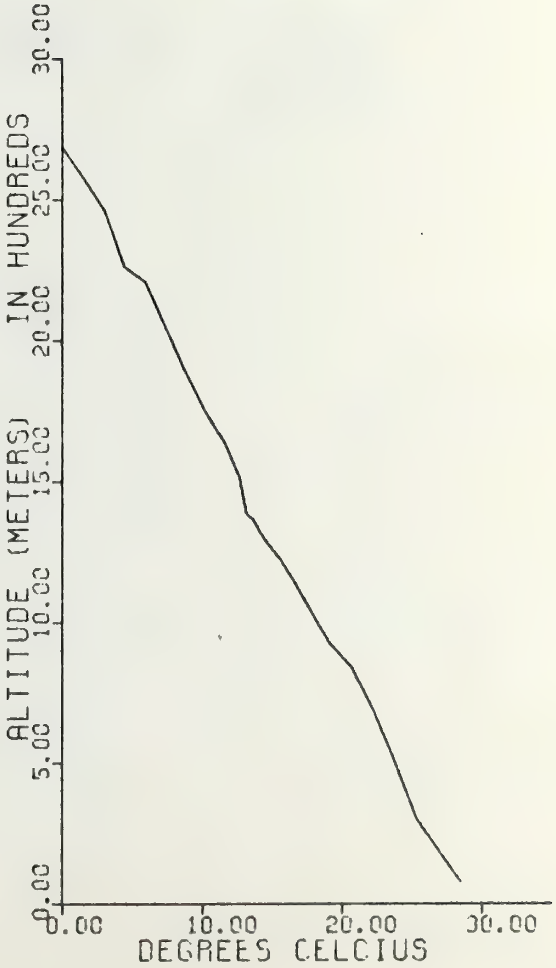
WIND DIRECTION



WIND SPEED



TEMPERATURE

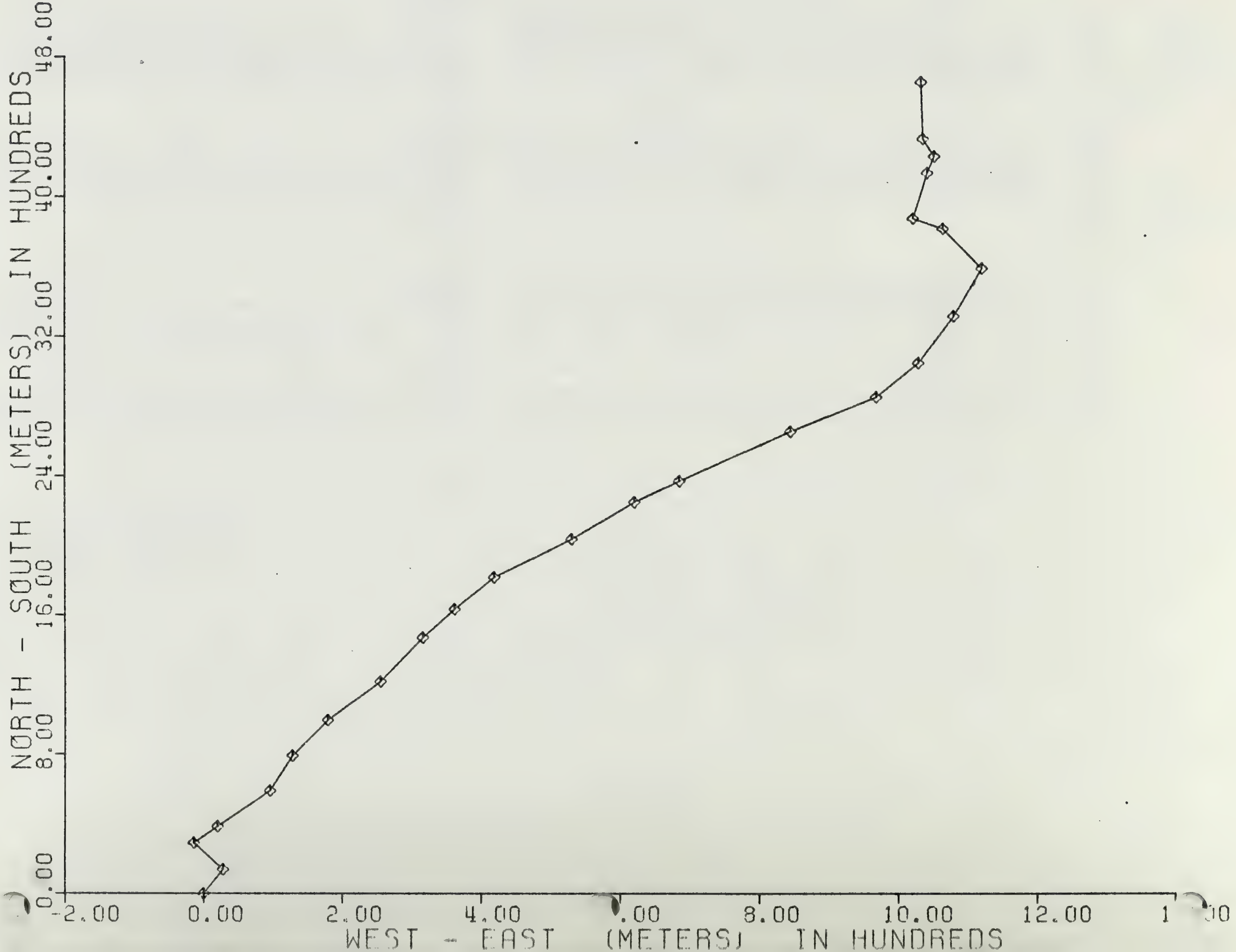


C-B PIER SOUNDING

TIME 1300   DATE 7/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7- 7-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE              238.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1            THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0          58.5       -0.0         0.0
   0.5        289.1       42.6          55.4        3.5        13.5
   1.0        284.7       46.7          54.7        6.3        16.0
   1.5        283.3       53.5          53.9        8.9        16.8
   2.0        294.7       51.3          50.8       12.1        17.8
   2.5        296.7       45.6          45.8       15.8        18.9
   3.0        294.8       42.9          42.4       18.5        20.0
   3.5        292.3       42.6          39.6       22.2        19.4
   4.0        292.4       42.5          36.6       25.3        18.9
   4.5        288.7       44.0          34.5       28.3        18.4
   5.0        285.1       45.5          37.3       35.5        17.8
   5.5        282.6       49.7          41.4       38.7        17.3
   6.0        277.3       54.0          44.5       41.3        16.8
   6.5        272.3       57.6          46.8       43.4        16.3
   7.0        269.6       61.4          47.9       44.0        15.7
   7.5        271.0       65.3          47.6       44.0        15.2
   8.0        276.1       67.8          46.8       43.8        14.7
   8.5        288.7       71.1          45.8       43.2        14.2
   9.0        301.9       72.3          45.0       42.6        13.7
   9.5        316.4       72.7          45.2       42.1        13.2
  10.0        329.0       72.7          45.2       41.5        12.6
  10.5        344.5       71.8          45.0       39.7        11.8
  11.0        354.3       70.3          44.7       38.7        11.1
  11.5          4.3       67.7          44.1       37.2        10.4
  12.0         11.7       64.1          43.6       35.9         9.6


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       53.7        5.0
     2       93.0        5.2
     3       52.7        5.3
     4       91.6        5.7
     5      122.1        6.1
     6      144.2        6.3
     7      181.7        6.6
     8      211.5        6.9
     9      134.4        7.1
    10      528.7        7.3
    11      639.4        7.5
    12      577.3        7.7
    13      487.7        7.9
    14      346.8        8.2
    15      215.6        8.6
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     16      170.6         8.9
     17      145.8         9.5
     18      164.1        10.0
     19      255.8        10.5
     20      272.3        11.0
     21      197.1        11.5
     22      151.2        12.0
     23       56.5        12.6
     24       27.0        13.5


             HEIGHT  DIRECTION  SPEED  TEMP
              FEET    DEGREES   FT/SEC DEG C

              385.    104.        9.4  13.5
              612.     92.        3.7  16.0
              862.    131.        5.7  16.8
             1127.    128.       12.3  17.8
             1410.    115.       13.0  18.9
             1598.    102.       10.2  20.0
             1859.    104.        9.0  19.4
             2105.     93.        7.4  18.9
             2345.     47.        7.6  18.4
             2715.      1.        7.2  17.8
             2972.    333.        7.8  17.3
             3233.    336.        7.3  16.8
             3481.    313.        5.5  16.3
             3689.    261.        5.5  15.7
             3916.    229.        6.6  15.2
             4096.    217.       10.0  14.7
             4379.    214.       12.1  14.2
             4585.    216.       11.6  13.7
             4796.    221.       11.5  13.2
             4987.    225.       13.2  12.6
             5084.    225.       13.7  11.8
             5214.    222.       14.3  11.1
             5345.    220.       18.1  10.4


             HEIGHT  DIRECTION  SPEED  TEMP
             METERS   DEGREES   M/SEC  DEG C

              117.    104.        2.9  13.5
              187.     92.        1.1  16.0
              263.    131.        1.7  16.8
              343.    128.        3.7  17.8
              430.    115.        4.0  18.9
              487.    102.        3.1  20.0
              567.    104.        2.7  19.4
              641.     93.        2.3  18.9
              715.     47.        2.3  18.4
              828.      1.        2.2  17.8
              906.    333.        2.4  17.3
              986.    336.        2.2  16.8
             1061.    313.        1.7  16.3
             1124.    261.        1.7  15.7
             1194.    229.        2.0  15.2
             1248.    217.        3.0  14.7
             1335.    214.        3.7  14.2
             1397.    216.        3.5  13.7
             1462.    221.        3.5  13.2
             1520.    225.        4.0  12.6
             1550.    225.        4.2  11.8
             1589.    222.        4.4  11.1
             1629.    220.        5.5  10.4
```
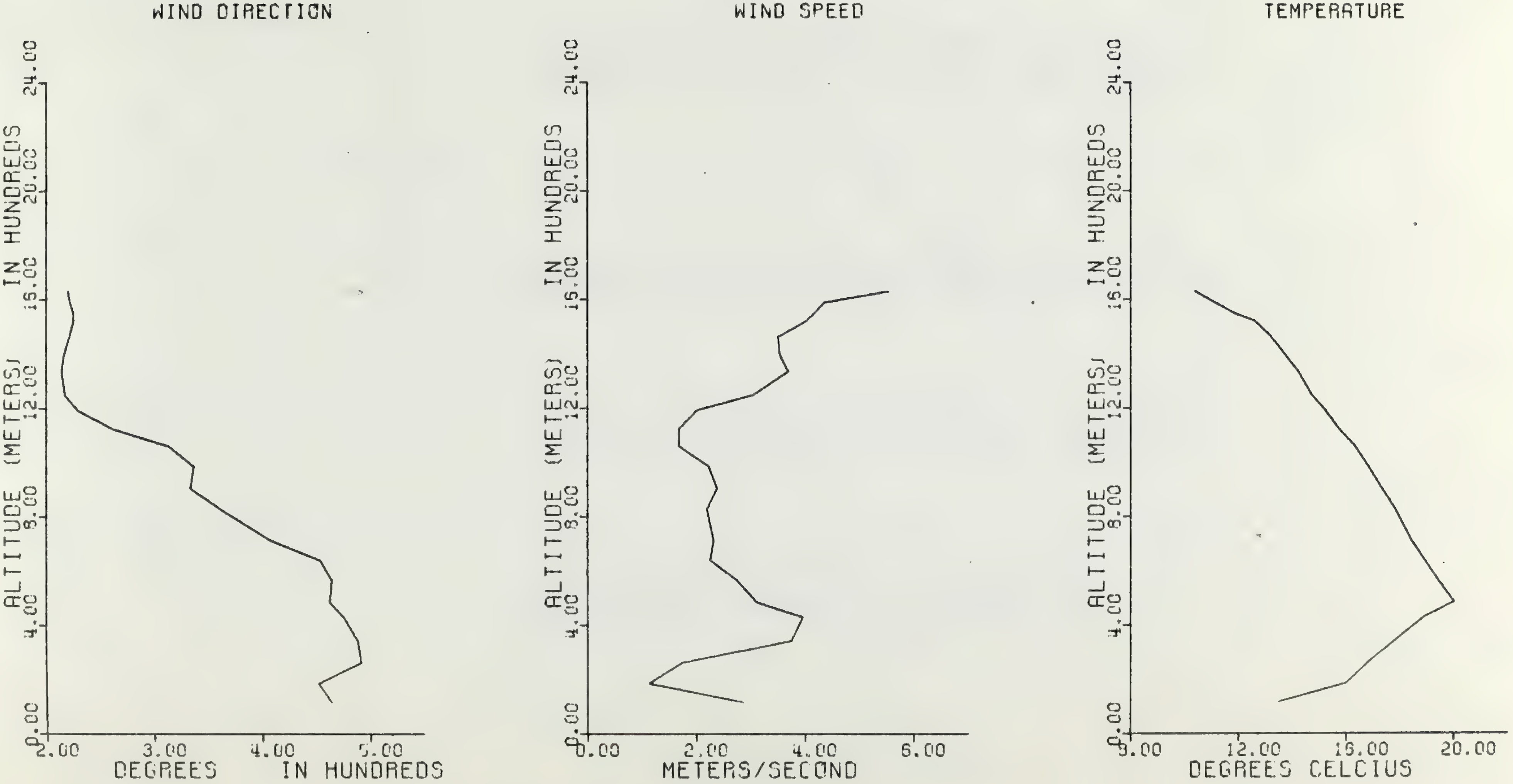

C-B PIBAL SOUNDING

TIME 700 DATE 7/7/78

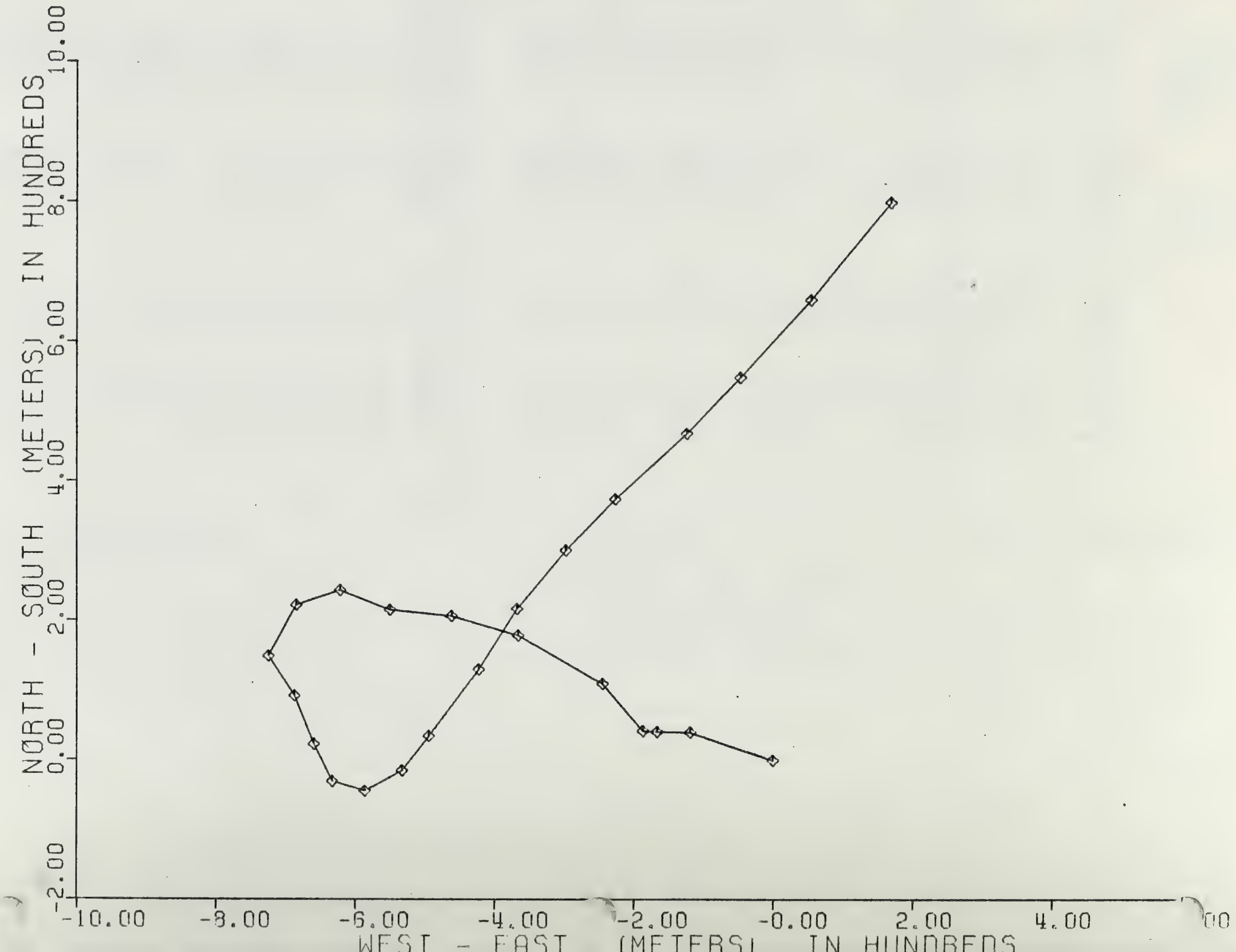


C-B PIER SOUNDING

TIME 700 DATE 7/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7- 7-78

BALLOON RELEASED 1345 MST


BASE LINE ANGLE              239.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                 THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0           59.5       -0.0        0.0
   0.5           0.8       26.1           53.4        3.1       29.4
   1.0           7.2       24.6           49.6        5.6       28.2
   1.5           8.0       24.0           46.3        7.6       27.1
   2.0           7.1       26.3           43.6       10.1       26.0
   2.5           7.0       31.1           41.6       13.8       24.8
   3.0           6.5       33.8           39.2       16.7       23.5
   3.5           6.4       35.8           38.4       18.7       22.0
   4.0           6.5       37.1           37.5       20.8       20.5
   4.5           7.3       39.9           36.5       23.2       19.0
   5.0           8.7       40.0           36.2       24.2       17.7
   5.5          12.5       38.0           36.6       24.3       16.4
   6.0          15.2       36.3           36.9       23.8       15.4
   6.5          17.2       35.4           37.0       23.5       14.7
   7.0          19.0       34.7           37.2       23.6       14.0
   7.5          19.5       34.1           36.7       23.9       13.3
   8.0          18.9       33.4           35.9       23.9       12.7
   8.5          18.4       30.2           35.0       23.9       12.0
   9.0          18.2       30.1           34.3       23.7       11.3
   9.5          18.2       31.0           33.8       24.1       10.6
  10.0          18.8       30.9           33.5       23.8        9.9
  10.5          18.9       30.5           33.2       23.9        9.0
  11.0          19.0       31.1           33.0       24.5        8.0
  11.5          19.5       31.0           33.0       24.9        7.0
  12.0          19.4       31.1           33.3       25.4        6.0


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       52.4        5.9
     2       78.6        7.0
     3      108.0        8.1
     4      129.6        9.0
     5      152.5       10.0
     6      133.9       11.2
     7      159.4       11.8
     8      229.3       12.6
     9      161.6       13.7
    10      201.2       14.5
    11      315.3       15.9
    12      340.8       16.9
    13      306.3       17.9
    14      330.3       19.0
    15      368.6       20.2
```

```
      16       407.0        20.8
      17       856.4        22.2
      18       762.8        22.9
      19       632.1        23.7
      20       497.7        24.7
      21       552.4        25.5
      22       545.8        26.3
      23       630.3        27.4
      24       790.7        27.0


             HEIGHT   DIRECTION   SPEED  TEMP
              FEET     DEGREES   FT/SEC DEG C

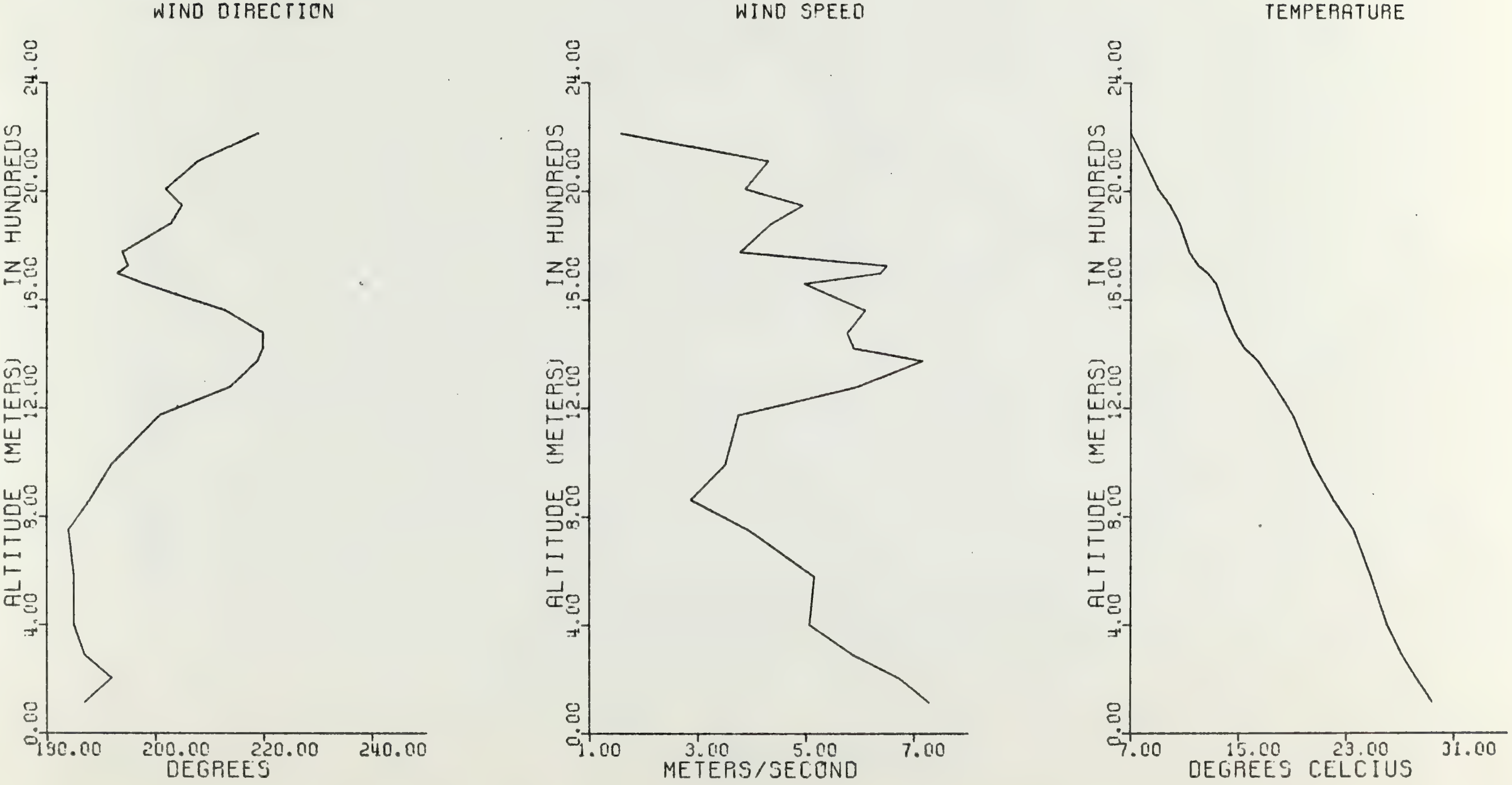
               377.      187.       23.9  29.4
               673.      192.       22.1  28.2
               950.      187.       19.3  27.1
              1320.      185.       16.6  26.0
              1902.      185.       16.9  24.8
              2467.      184.       12.9  23.5
              2834.      188.        9.4  22.0
              3254.      192.       11.5  20.5
              3858.      201.       12.3  19.0
              4194.      214.       19.5  17.7
              4511.      219.       23.5  16.4
              4664.      220.       19.3  15.4
              4851.      220.       18.9  14.7
              5123.      213.       20.0  14.0
              5445.      198.       16.3  13.3
              5568.      193.       20.9  12.7
              5663.      195.       21.3  12.0
              5829.      194.       12.4  11.3
              6177.      203.       14.3  10.6
              6395.      205.       16.2   9.9
              6592.      202.       12.7   9.0
              6927.      208.       14.1   8.0
              7263.      219.        5.2   7.0


             HEIGHT   DIRECTION   SPEED  TEMP
             METERS    DEGREES   M/SEC  DEG C

               115.      187.        7.3  29.4
               205.      192.        6.7  28.2
               290.      187.        5.9  27.1
               402.      185.        5.1  26.0
               580.      185.        5.2  24.8
               752.      184.        3.9  23.5
               864.      188.        2.9  22.0
               992.      192.        3.5  20.5
              1176.      201.        3.7  19.0
              1278.      214.        5.9  17.7
              1375.      219.        7.2  16.4
              1422.      220.        5.9  15.4
              1478.      220.        5.8  14.7
              1561.      213.        6.1  14.0
              1660.      198.        5.0  13.3
              1697.      193.        6.4  12.7
              1726.      195.        6.5  12.0
              1777.      194.        3.8  11.3
              1883.      203.        4.4  10.6
              1949.      205.        4.9   9.9
              2009.      202.        3.9   9.0
              2111.      208.        4.3   8.0
              2214.      219.        1.6   7.0
```

C-B PIBAL SOUNDING

TIME 1345 DATE 7/7/78

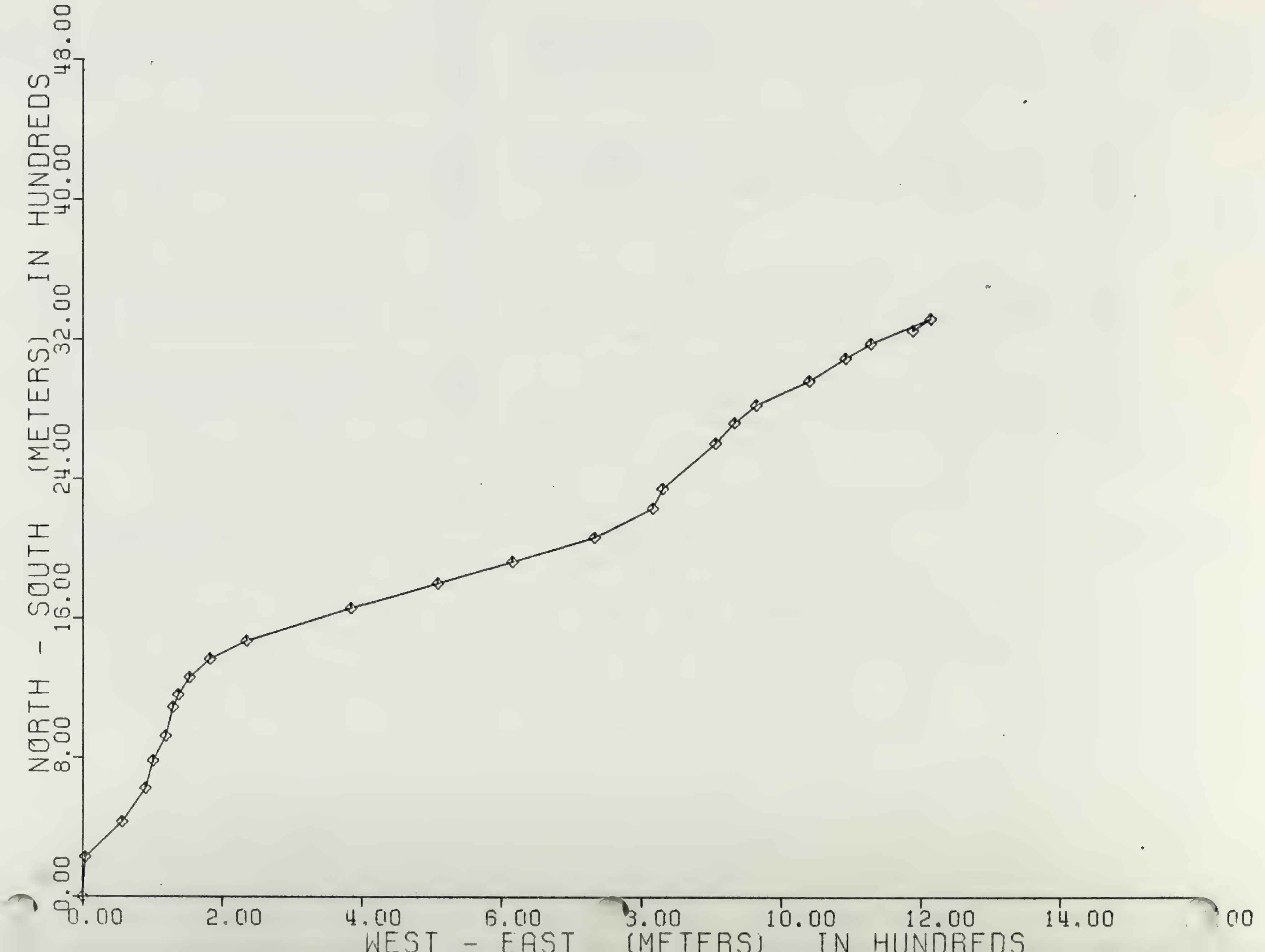


C-B PIE - SOUNDING

TIME 1345 DATE 7/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-b PIBAL SOUNDING

TIME: 0640 DATE: 7/10/78

DOUBLE THEODOLITE DATA NOT REDUCED. NO DATA FOR SITE #2.

C-b PIBAL SOUNDING

TIME: 1330 DATE: 7/10/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON BEHIND OBSTRUCTIONS.

```
C-B PIBAL SOUNDING

SOUNDING DATE  7-11-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE              238.5
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0          58.5       -0.0        0.0
   0.5         287.0       24.5          54.0        2.6       16.8
   1.0         296.9       25.0          49.3        5.1       17.2
   1.5         310.4       25.8          44.0        7.6       17.4
   2.0         326.1       25.6          36.4       10.9       17.1
   2.5         336.1       22.4          30.5       12.2       16.3
   3.0         342.3       20.9          25.7       13.5       15.5
   3.5         348.3       19.0          20.7       13.7       15.1
   4.0         353.3       17.1          20.9       13.2       14.7
   4.5         357.2       15.7          20.3       12.9       14.2
   5.0           0.6       15.1          20.8       12.7       14.1
   5.5           4.2       14.7          21.7       12.5       14.3
   6.0           7.4       14.6          23.6       12.2       14.3
   6.5           9.7       15.5          24.1       13.4       14.1
   7.0          11.8       16.2          25.1       13.8       13.4
   7.5          13.3       16.8          25.9       13.3       12.8
   8.0          15.9       17.2          27.2       14.7       12.2
   8.5          17.7       17.4          28.3       14.9       11.6
   9.0          19.4       17.6          29.4       15.3       10.6
   9.5          21.1       17.8          30.5       15.5        9.7
  10.0          23.0       18.3          31.7       15.8        8.7
  10.5          24.9       18.6          32.8       16.1        7.8
  11.0          26.4       18.8          33.8       16.4        6.9
  11.5          27.1       18.9          34.4       16.6        6.4
  12.0          28.1       19.1          35.0       16.8        5.8



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       75.4        5.0
     2       95.2        5.3
     3      117.1        5.9
     4      153.2        7.3
     5      220.8        9.0
     6      287.0       11.0
     7      269.1       14.4
     8      376.7       16.3
     9      455.5       18.9
    10      488.1       20.9
    11      494.1       23.2
    12      455.6       24.0
    13      567.1       26.5
    14      516.4       28.0
    15      209.8       28.5
    16      528.3       31.1
    17      539.5       32.2
    18      625.2       33.3
    19      638.8       34.3
    20      590.9       35.8
    21      583.5       38.1
    22      627.9       39.5
    23      689.4       39.5
    24      685.8       40.9


           HEIGHT   DIRECTION   SPEED   TEMP
            FEET     DEGREES   FT/SEC  DEG C

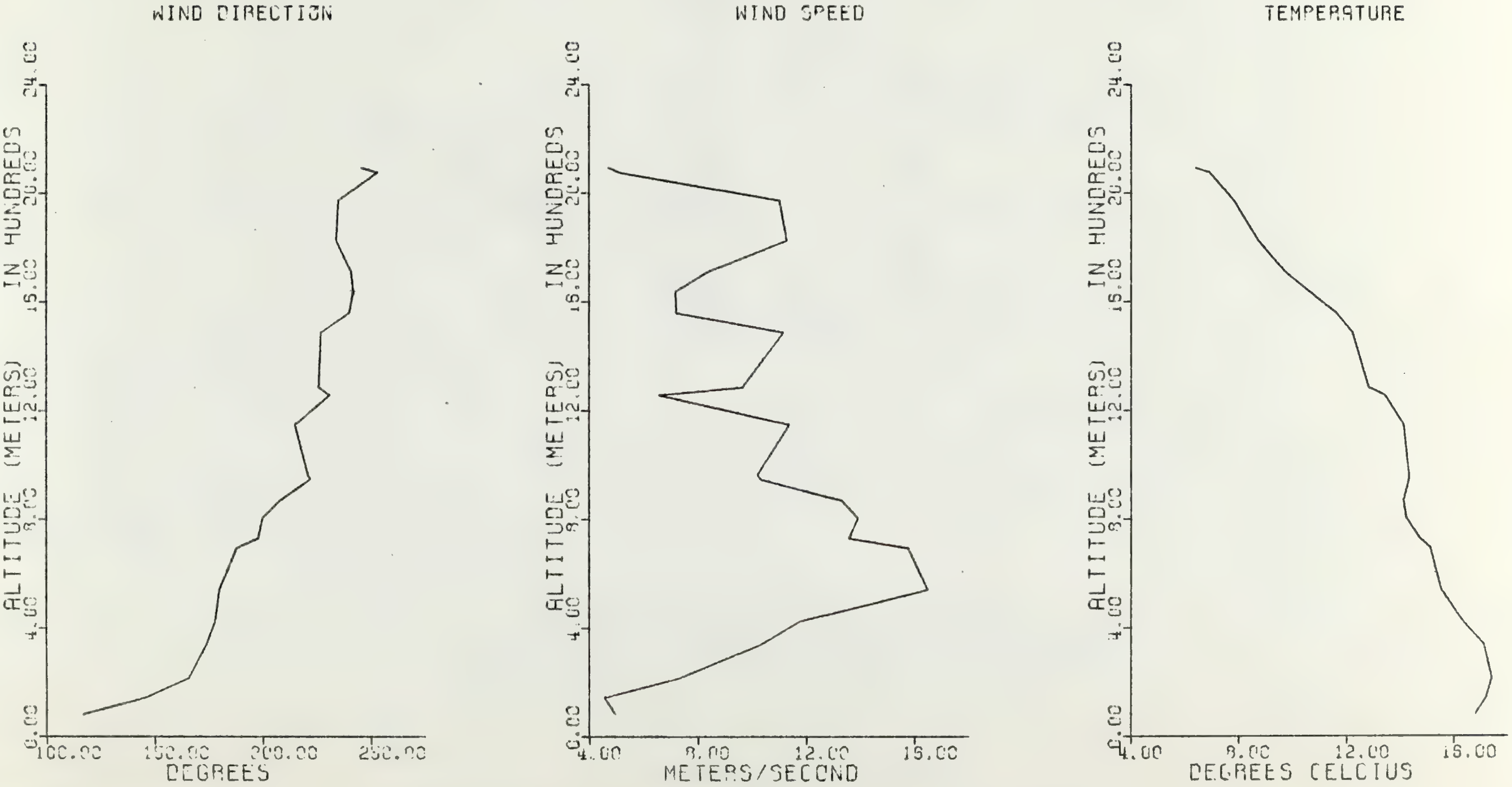
             272.     117.       16.3   16.8
             475.     146.       15.0   17.2
             707.     166.       24.0   17.4
            1111.     174.       33.8   17.1
            1397.     178.       38.6   16.3
            1779.     180.       54.1   15.5
            2282.     188.       51.7   15.1
            2397.     198.       44.5   14.7
            2644.     200.       45.6   14.2
            2855.     208.       43.6   14.1
            3111.     222.       33.8   14.3
            3164.     221.       33.4   14.3
            3768.     215.       37.3   14.1
            4125.     231.       21.5   13.4
            4219.     226.       31.6   12.8
            4881.     227.       36.6   12.2
            5114.     240.       23.6   11.6
            5373.     242.       23.5   10.6
            5610.     241.       27.4    9.7
            5989.     234.       37.0    8.7
            6476.     235.       36.1    7.8
            6813.     253.       16.7    6.9
            6868.     246.       15.5    6.4


           HEIGHT   DIRECTION   SPEED   TEMP
           METERS    DEGREES    M/SEC  DEG C

              83.     117.        5.0   16.8
             145.     146.        4.6   17.2
             216.     166.        7.3   17.4
             339.     174.       10.3   17.1
             426.     178.       11.8   16.3
             542.     180.       16.5   15.5
             696.     188.       15.8   15.1
             731.     198.       13.6   14.7
             806.     200.       13.9   14.2
             870.     208.       13.3   14.1
             948.     222.       10.3   14.3
             964.     221.       10.2   14.3
            1149.     215.       11.4   14.1
            1257.     231.        6.6   13.4
            1286.     226.        9.6   12.8
            1488.     227.       11.2   12.2
            1559.     240.        7.2   11.6
            1638.     242.        7.2   10.6
            1710.     241.        8.4    9.7
            1826.     234.       11.3    8.7
            1974.     235.       11.0    7.8
            2077.     253.        5.1    6.9
```

C-B PIBAL SOUNDING

TIME 645   DATE 7/11/78

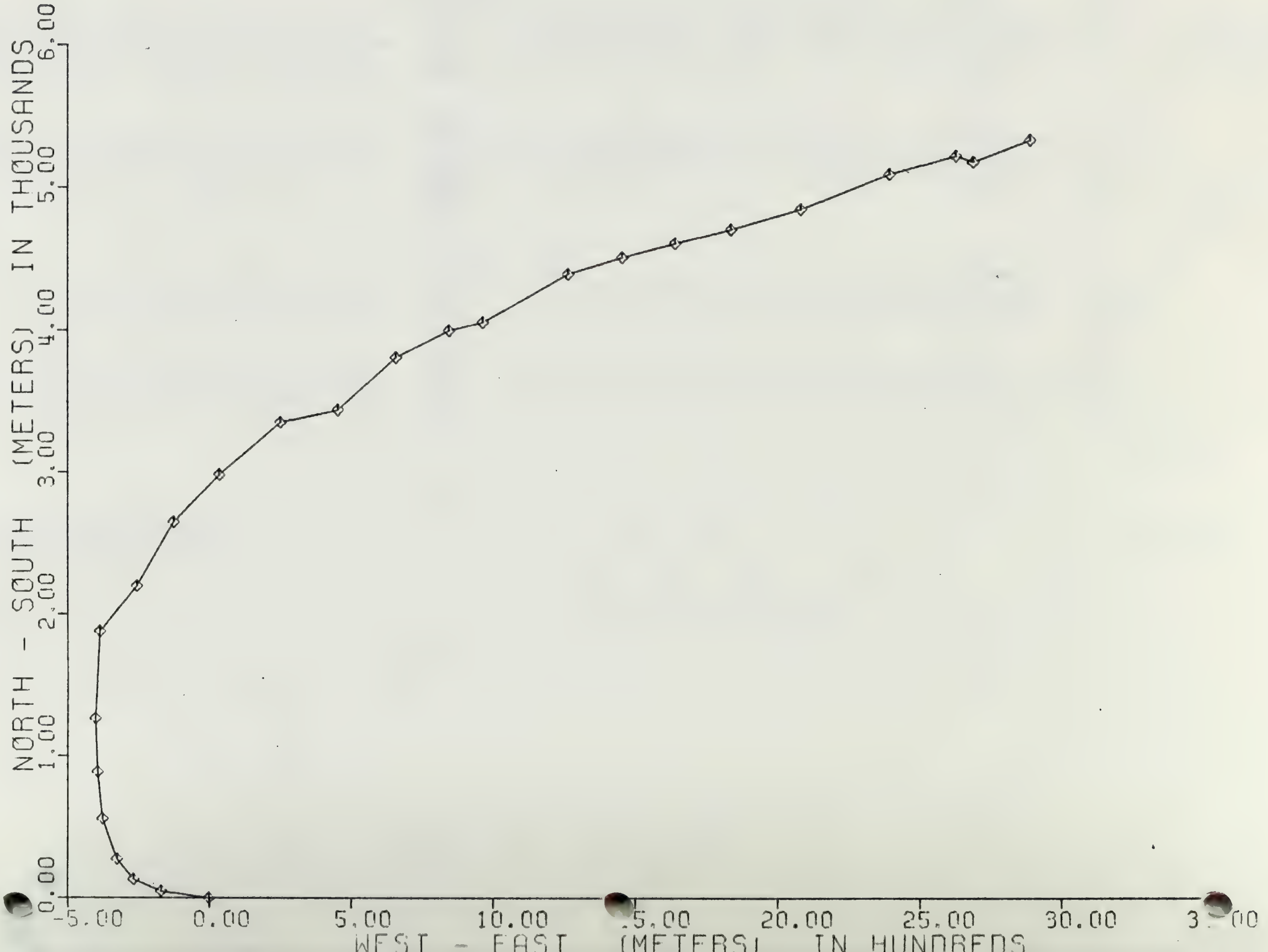


C-B PIB SOUNDING

TIME 645 DATE 7/11/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-b PIBAL SOUNDING

TIME: 1345 DATE: 7/11/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON BEHIND OBSTRUCTIONS.

```
C-B PIBAL SOUNDING

SOUNDING DATE  7-13-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE           240.0
BASE LINE LENGTH (FT)    5426.5
TIME INTERVAL (SEC)        30.0
BASE LINE HEIGHT (FT)     100.0


                    THEODOLITE #1             THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           60.0       -0.0        0.0
   0.5          299.2       46.7           58.1        2.5       18.3
   1.0          317.2       62.7           57.9        5.2       20.8
   1.5          320.6       60.6           56.3        7.5       22.2
   2.0          325.0       64.2           55.8       10.1       22.8
   2.5          342.4       65.0           55.0       12.2       22.6
   3.0          352.1       64.6           54.5       14.1       22.4
   3.5            7.2       63.5           54.5       15.8       22.2
   4.0           18.3       60.1           54.2       17.1       22.0
   4.5           26.2       56.8           54.2       18.2       21.8
   5.0           32.0       53.8           54.3       19.4       21.4
   5.5           37.0       52.6           54.8       20.7       20.8
   6.0           39.5       50.8           54.7       21.1       20.1
   6.5           41.2       47.7           54.6       21.4       19.5
   7.0           42.4       46.0           54.6       21.9       18.8
   7.5           43.5       43.8           54.4       22.1       18.2
   8.0           44.3       42.7           54.3       22.4       17.5
   8.5           45.7       41.4           54.6       22.8       16.9
   9.0           46.5       40.6           54.8       23.0       16.3
   9.5           48.1       39.4           55.3       23.1       15.8
  10.0           49.1       38.7           55.7       23.2       15.4
  10.5           50.4       38.1           56.1       23.4       14.9
  11.0           51.4       37.5           56.6       23.6       14.5
  11.5           52.3       37.9           57.0       23.8       14.0
  12.0           52.7       36.7           57.2       23.9       13.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       71.9       5.0
     2       88.9       5.2
     3       89.2       5.5
     4      104.4       5.8
     5       98.8       6.2
     6      117.0       6.6
     7      128.8       7.1
     8      133.8       7.8
     9      151.1       8.5
    10      178.1       9.3
    11      188.0      10.1
    12      161.3      10.7
    13      193.9      11.7
    14      222.8      12.5
    15      229.7      13.5
```

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16      227.8      14.2
17      259.6      15.3
18      281.3      16.0
19      296.0      17.1
20      316.8      17.8
21      303.4      18.8
22      336.5      19.7
23      307.5      19.7
24      367.1      21.2

           HEIGHT   DIRECTION   SPEED  TEMP
            FEET     DEGREES   FT/SEC  DEG C

             289.      137.       4.6   18.3
             553.      170.       3.3   20.8
             769.      156.       3.4   22.2
            1024.      203.       4.1   22.8
            1272.      212.       5.8   22.6
            1499.      225.       6.9   22.4
            1755.      230.      10.0   22.2
            2006.      230.      11.7   22.0
            2257.      233.      13.2   21.8
            2557.      238.      13.3   21.4
            2882.      239.      11.6   20.8
            3075.      232.      13.7   20.1
            3310.      231.      15.4   19.5
            3555.      231.      15.9   18.8
            3805.      231.      15.6   18.2
            4028.      235.      15.9   17.5
            4332.      238.      15.3   16.9
            4525.      241.      15.5   16.3
            4783.      244.      15.8   15.8
            4966.      245.      14.8   15.4
            5236.      246.      16.5   14.9
            5490.      258.       8.5   14.5
            5551.      245.      13.2   14.0

           HEIGHT   DIRECTION   SPEED  TEMP
           METERS    DEGREES    M/SEC  DEG C

              88.      137.       1.4   18.3
             168.      170.       1.0   20.8
             234.      156.       1.0   22.2
             312.      203.       1.2   22.8
             388.      212.       1.8   22.6
             457.      225.       2.1   22.4
             535.      230.       3.0   22.2
             611.      230.       3.6   22.0
             688.      233.       4.0   21.8
             779.      238.       4.1   21.4
             879.      239.       3.5   20.8
             937.      232.       4.2   20.1
            1009.      231.       4.7   19.5
            1084.      231.       4.8   18.8
            1160.      231.       4.8   18.2
            1228.      235.       4.8   17.5
            1320.      238.       4.7   16.9
            1379.      241.       4.7   16.3
            1458.      244.       4.8   15.8
            1514.      245.       4.5   15.4
            1596.      246.       5.0   14.9
            1673.      258.       2.6   14.5
            1692.      245.       4.0   14.0
```
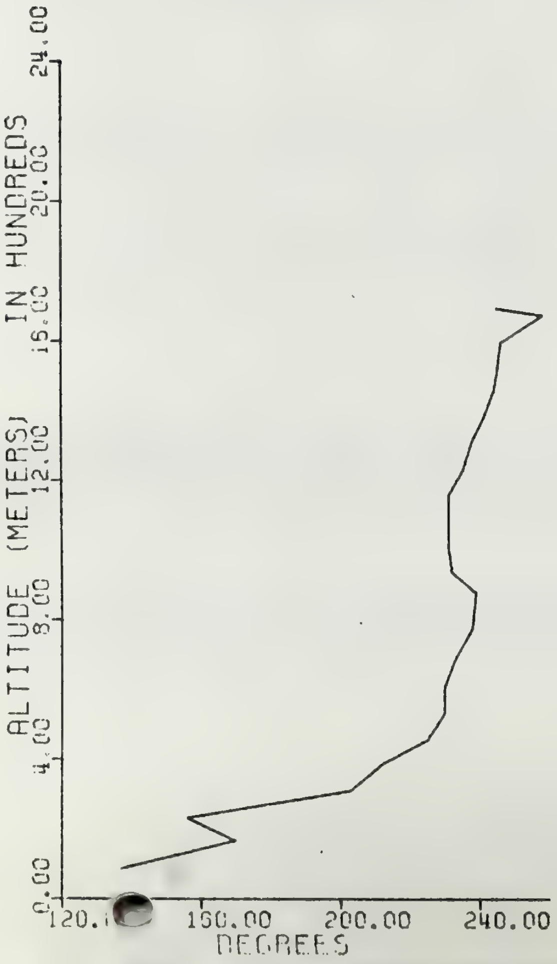
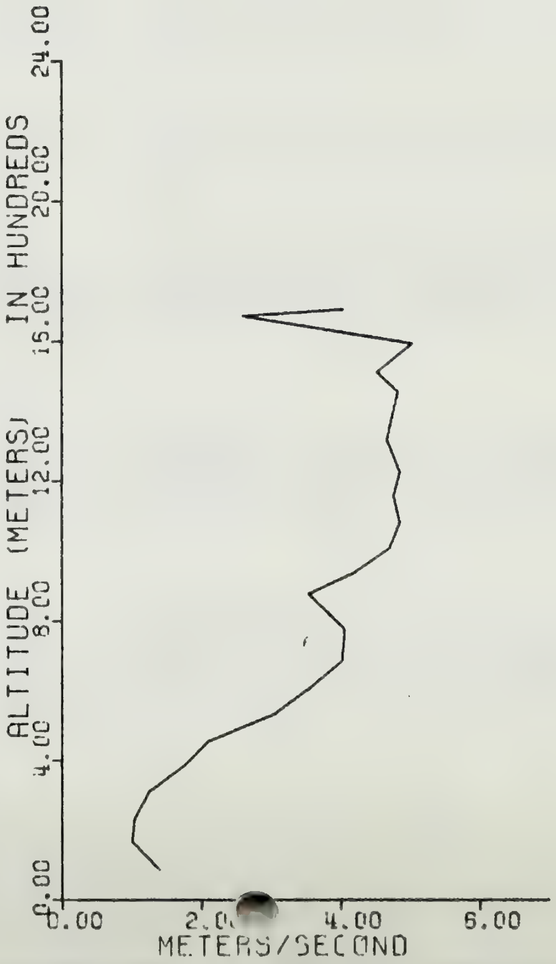

C-B PIBAL SOUNDING

TIME 650 DATE 7/13/78

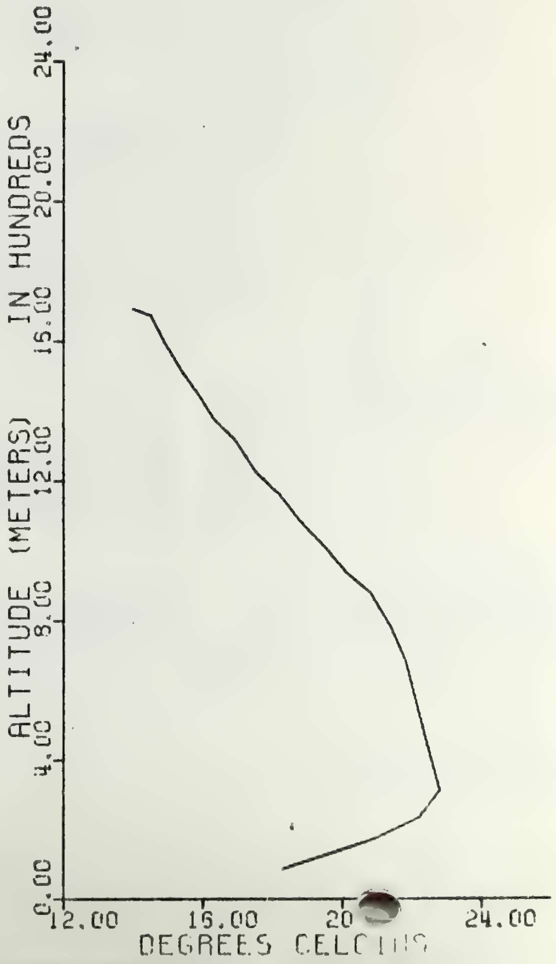
WIND DIRECTION



WIND SPEED



TEMPERATURE

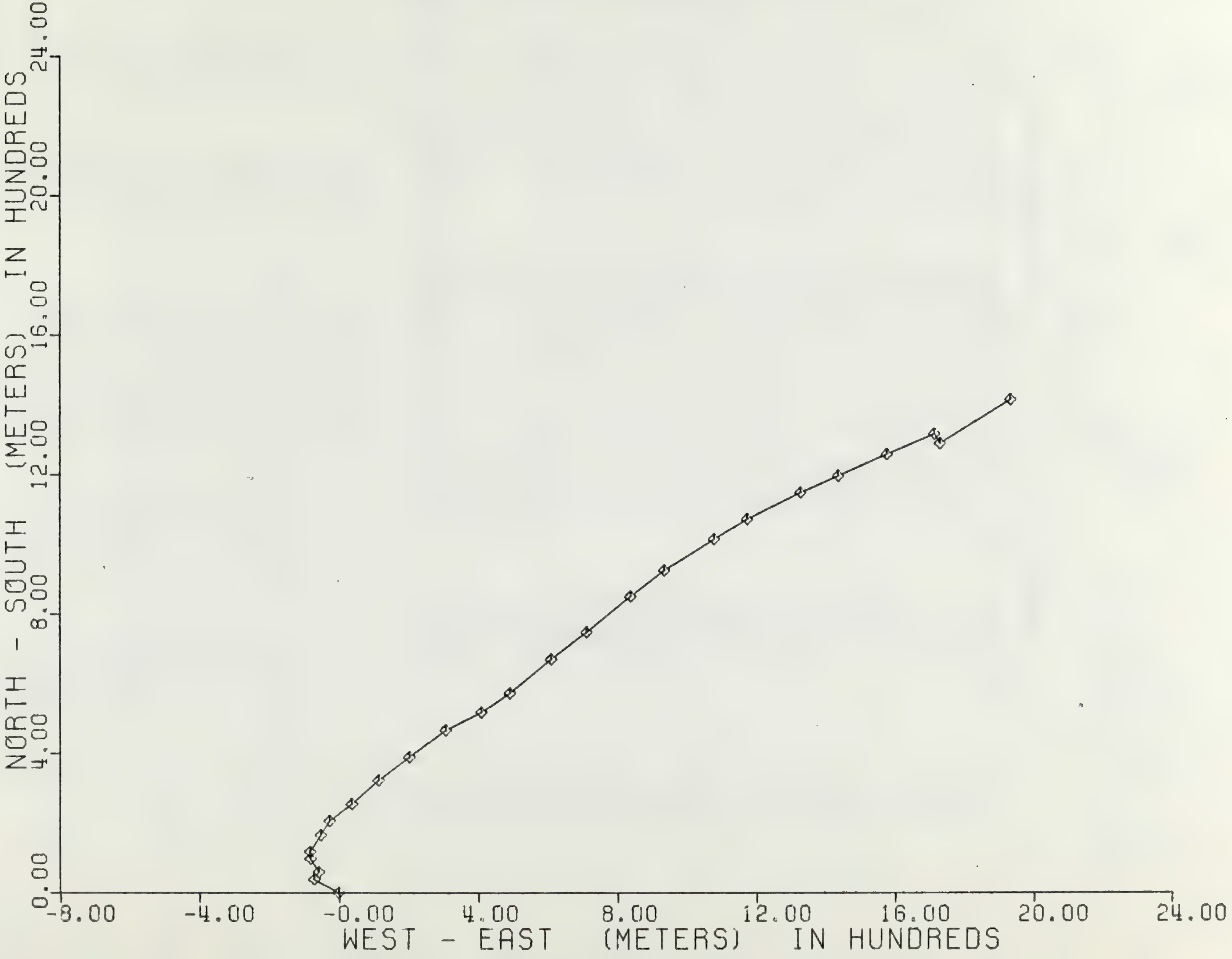


C-B PIB[illegible] SOUNDING

TIME 650   DATE 7/13/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-13-78

BALLOON RELEASED 1345 MST


BASE LINE ANGLE              240.0
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0

                THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           60.0       -0.1         0.0
   0.5          34.1       20.0           58.2        1.9        36.0
   1.0          34.1       24.9           55.3        5.0        34.4
   1.5          26.3       29.2           51.4        9.3        32.9
   2.0          23.8       32.1           49.0       12.9        31.4
   2.5          23.9       35.0           47.3       15.9        29.9
   3.0          23.9       33.5           46.2       16.7        28.2
   3.5          23.9       32.9           44.7       18.1        26.6
   4.0          24.1       32.8           43.5       19.2        25.0
   4.5          25.0       32.9           42.8       20.3        23.8
   5.0          25.2       31.4           42.0       20.6        22.6
   5.5          25.2       30.9           41.1       20.9        21.4
   6.0          25.1       30.1           40.3       21.1        20.2
   6.5          25.0       30.1           39.5       21.9        19.0
   7.0          25.8       31.0           39.4       23.1        17.8
   7.5          26.2       31.3           39.0       24.0        16.5
   8.0          26.5       32.1           39.3       25.0        15.0
   8.5          27.5       32.5           39.8       25.5        13.6
   9.0          29.1       33.0           40.5       26.1        12.1
   9.5          30.2       33.8           41.0       26.8        10.6
  10.0          30.9       34.3           41.3       27.8         9.1
  10.5          31.4       35.0           41.4       28.6         7.6
  11.0          31.8       35.0           41.4       28.7         6.2
  11.5          31.7       35.0           41.3       28.8         4.7
  12.0          31.5       35.4           41.1       29.2         3.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       37.7         5.6
     2        7.4         7.0
     3       72.2         8.4
     4      145.1         9.7
     5      130.5        10.9
     6      191.2        11.9
     7      240.2        13.3
     8      248.5        14.6
     9      263.3        16.0
    10      359.2        17.3
    11      355.7        18.5
    12      400.2        19.7
    13      459.0        21.2
    14      492.2        22.8
    15      547.7        24.6
```

```
        16        652.2         25.1
        17        681.6         25.8
        18        686.0         27.2
        19        665.2         28.3
        20        787.9         29.9
        21        802.1         31.2
        22        777.1         32.2
        23        797.9         32.4
        24        800.5         32.8


             HEIGHT   DIRECTION    SPEED   TEMP
              FEET     DEGREES    FT/SEC  DEG C

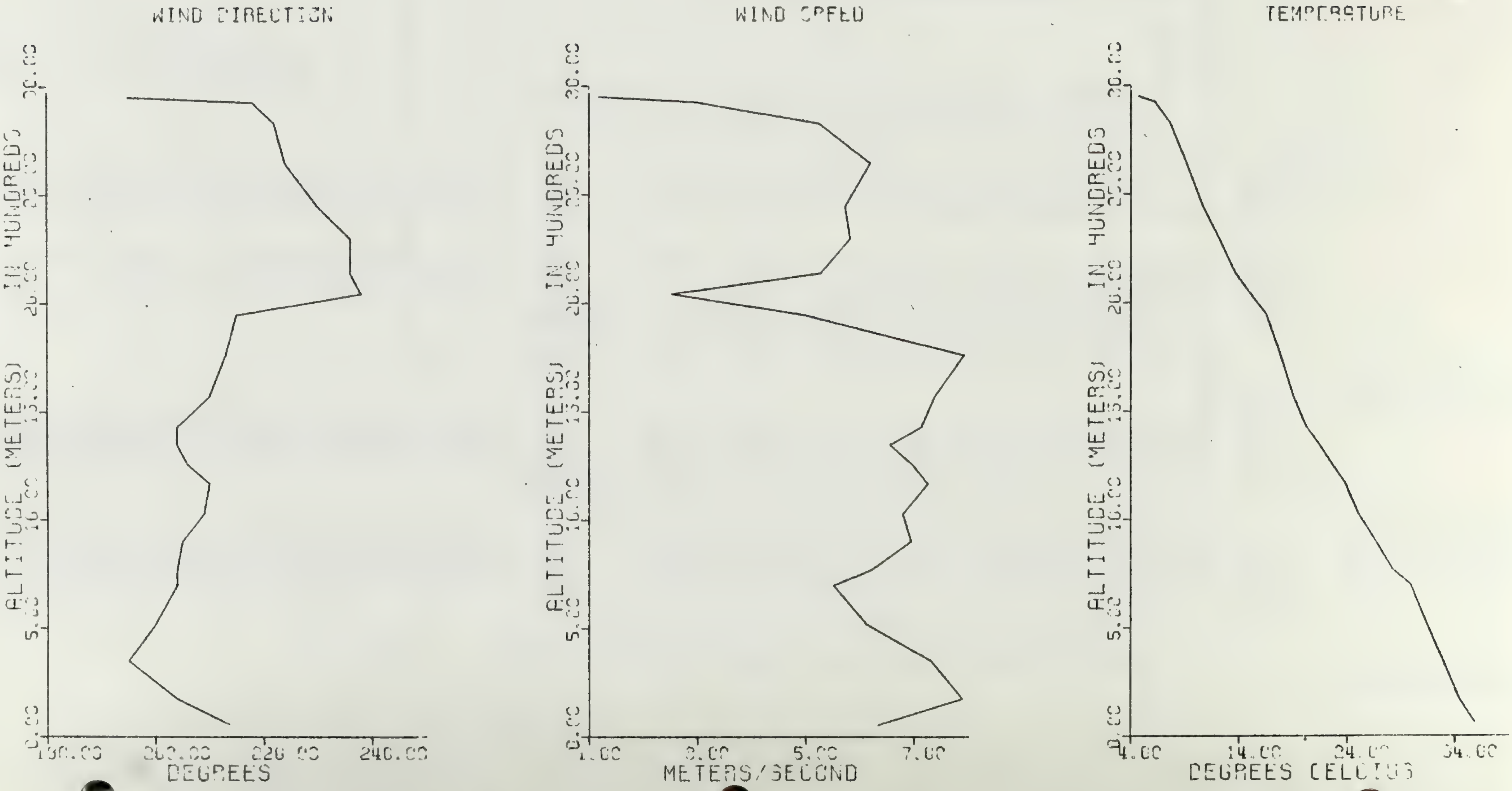
               175.     214.        20.7   36.0
               578.     204.        25.9   34.4
              1147.     195.        24.0   32.9
              1703.     200.        20.1   31.4
              2298.     204.        18.1   29.9
              2534.     204.        20.4   28.2
              2963.     205.        22.8   26.6
              3376.     209.        22.3   25.0
              3839.     210.        23.8   23.8
              4121.     206.        22.9   22.6
              4424.     204.        21.5   21.4
              4691.     204.        23.4   20.2
              5155.     210.        24.2   19.0
              5772.     213.        26.0   17.8
              6385.     215.        16.3   16.5
              6702.     238.         8.3   15.0
              7013.     236.        17.3   13.6
              7536.     236.        19.1   12.1
              8023.     230.        18.8   10.6
              8675.     224.        20.3    9.1
              9278.     222.        17.2    7.6
              9602.     218.         9.8    6.2
              9684.     195.         3.9    4.7


             HEIGHT   DIRECTION    SPEED   TEMP
             METERS    DEGREES    M/SEC   DEG C

                53.     214.         6.3   36.0
               176.     204.         7.9   34.4
               350.     195.         7.3   32.9
               519.     200.         6.1   31.4
               700.     204.         5.5   29.9
               772.     204.         6.2   28.2
               903.     205.         6.9   26.6
              1029.     209.         6.8   25.0
              1170.     210.         7.3   23.8
              1256.     206.         7.0   22.6
              1349.     204.         6.6   21.4
              1430.     204.         7.1   20.2
              1571.     210.         7.4   19.0
              1759.     213.         7.9   17.8
              1946.     215.         5.0   16.5
              2043.     238.         2.5   15.0
              2137.     236.         5.3   13.6
              2297.     236.         5.8   12.1
              2445.     230.         5.7   10.6
              2644.     224.         6.2    9.1
              2828.     222.         5.2    7.6
              2927.     218.         3.0    6.2
              2952.     195.         1.2    4.7
```

C-B PIBAL SOUNDING

TIME 1345   DATE 7/13/73

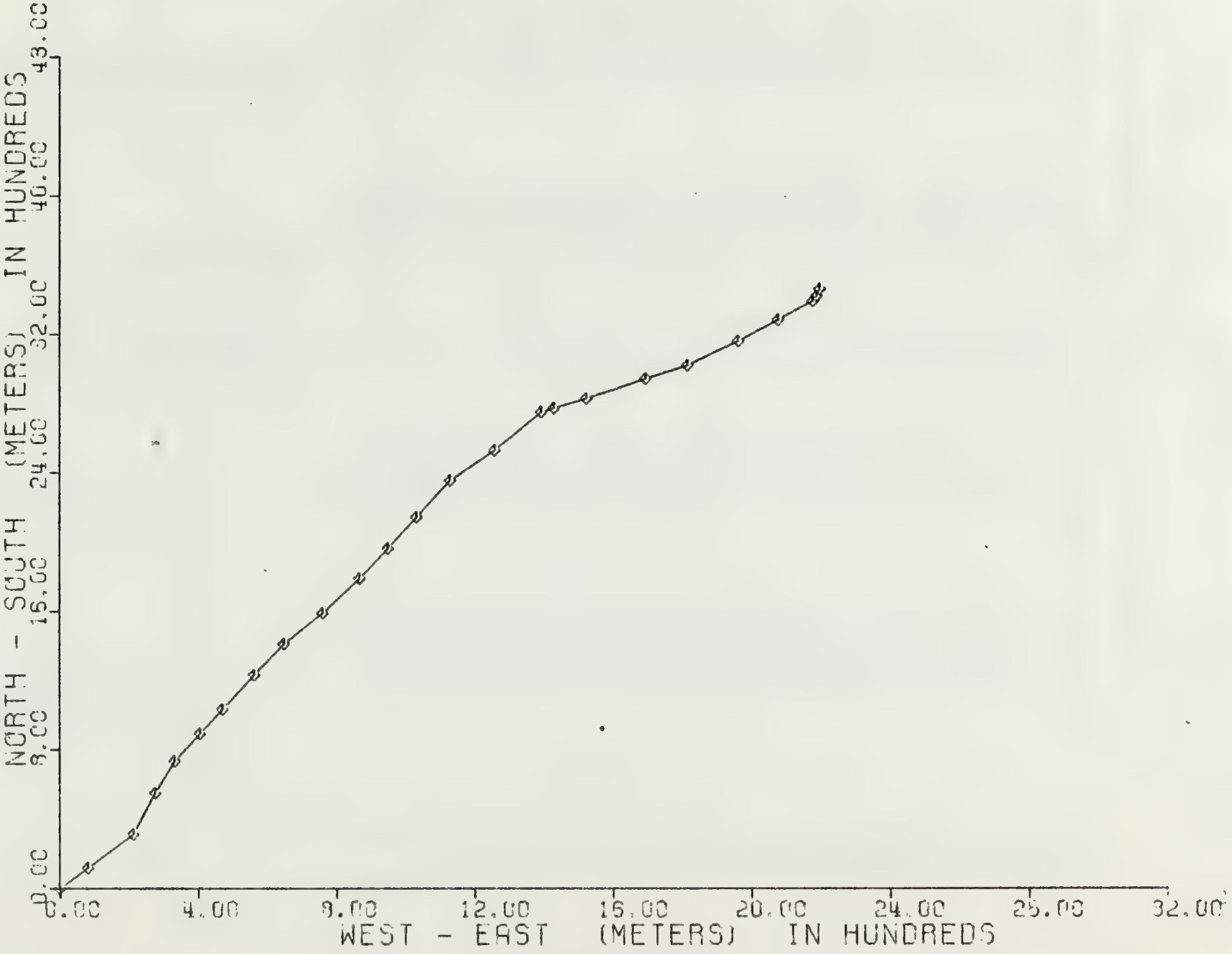


C-B PIBAL SOUNDING

TIME 1345 DATE 7/13/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-14-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE             240.0
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0          0.0        0.0           60.0       -0.0         0.0
   0.5        291.1       22.7           55.2        2.9        17.6
   1.0        285.9       31.6           53.4        6.3        17.5
   1.5        284.5       38.6           50.6       11.4        20.9
   2.0        284.1       37.7           48.1       13.7        23.0
   2.5        278.5       38.0           47.0       17.4        24.0
   3.0        271.8       39.3           46.4       21.8        24.7
   3.5        266.8       39.8           45.2       27.2        24.8
   4.0        263.3       40.0           44.8       31.9        24.4
   4.5        258.8       41.1           46.6       37.1        24.0
   5.0        250.6       42.9           47.8       41.9        23.6
   5.5        250.7       44.8           46.3       45.3        23.2
   6.0        256.5       47.1           46.0       47.2        22.6
   6.5        254.7       50.9           49.9       48.4        22.0
   7.0        251.6       55.6           54.0       49.1        21.4
   7.5        245.2       59.9           60.0       50.0        20.8
   8.0        235.0       63.9           66.6       49.8        20.2
   8.5        222.4       67.3           72.4       49.0        19.6
   9.0        208.7       69.5           76.5       48.0        19.0
   9.5        190.0       70.7           80.7       46.8        18.4
  10.0        175.1       70.9           83.7       45.7        17.8
  10.5        162.2       68.9           87.2       44.4        17.2
  11.0        153.2       65.5           89.6       43.2        16.4
  11.5        145.8       62.8           92.7       42.0        15.6
  12.0        141.4       59.6           94.8       41.0        14.8



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      113.4        5.0
     2      119.8        5.2
     3      113.7        5.5
     4      111.2        5.6
     5      143.7        5.7
     6      127.2        5.8
     7      118.3        6.0
     8      134.9        6.2
     9      168.6        6.3
    10       71.6        6.5
    11      108.3        6.9
    12      141.2        7.2
    13      180.3        7.5
    14      177.4        7.8
    15      204.2        8.2
```
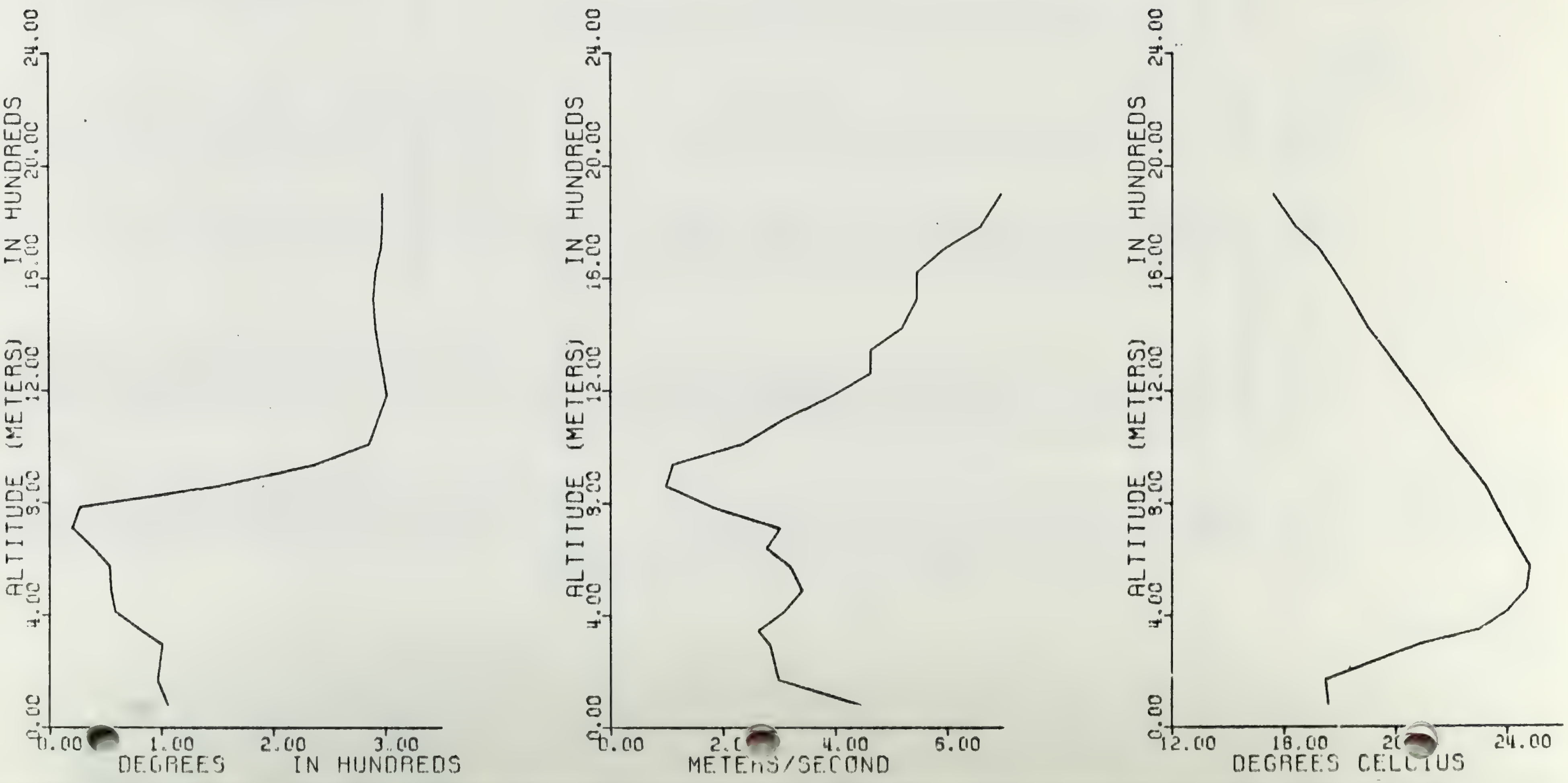

```
16        215.6        8.7
17        244.3        9.2
18        255.1        9.7
19        273.9       10.5
20        358.4       11.3
21        421.2       12.1
22        325.9       12.9
23        424.6       14.0
24        369.3       15.1
```

```
    HEIGHT  DIRECTION   SPEED  TEMP
     FEET    DEGREES   FT/SEC DEG C

      268.     106.      14.6  17.6
      560.      97.       9.8  17.5
      977.     101.       9.3  20.9
     1140.      82.       8.6  23.0
     1357.      59.      10.1  24.0
     1612.      55.      11.2  24.7
     1889.      54.      10.5  24.8
     2102.      39.       9.1  24.4
     2338.      20.       9.9  24.0
     2578.      27.       6.0  23.6
     2829.     152.       3.2  23.2
     3081.     238.       3.6  22.6
     3317.     286.       7.7  22.0
     3593.     294.      10.0  21.4
     3884.     302.      13.0  20.8
     4147.     299.      15.2  20.2
     4416.     295.      15.2  19.6
     4665.     292.      17.0  19.0
     5009.     290.      17.9  18.4
     5323.     292.      17.9  17.8
     5610.     297.      19.6  17.2
     5850.     296.      21.6  16.4
     6228.     298.      22.8  15.6
```

```
    HEIGHT  DIRECTION   SPEED   TEMP
    METERS   DEGREES    M/SEC   DEG C

       82.     106.       4.5  17.6
      171.      97.       3.0  17.5
      298.     101.       2.8  20.9
      347.      82.       2.6  23.0
      414.      59.       3.1  24.0
      491.      55.       3.4  24.7
      576.      54.       3.2  24.8
      641.      39.       2.8  24.4
      712.      20.       3.0  24.0
      786.      27.       1.8  23.6
      862.     152.       1.0  23.2
      939.     238.       1.1  22.6
     1011.     286.       2.3  22.0
     1095.     294.       3.0  21.4
     1184.     302.       4.0  20.8
     1264.     299.       4.6  20.2
     1346.     295.       4.6  19.6
     1422.     292.       5.2  19.0
     1527.     290.       5.5  18.4
     1622.     292.       5.5  17.8
     1710.     297.       6.0  17.2
     1783.     296.       6.6  16.4
     1898.     298.       6.9  15.6
```

C-B PIBAL SOUNDING

TIME 645 DATE 7/14/78


WIND DIRECTION

WIND SPEED

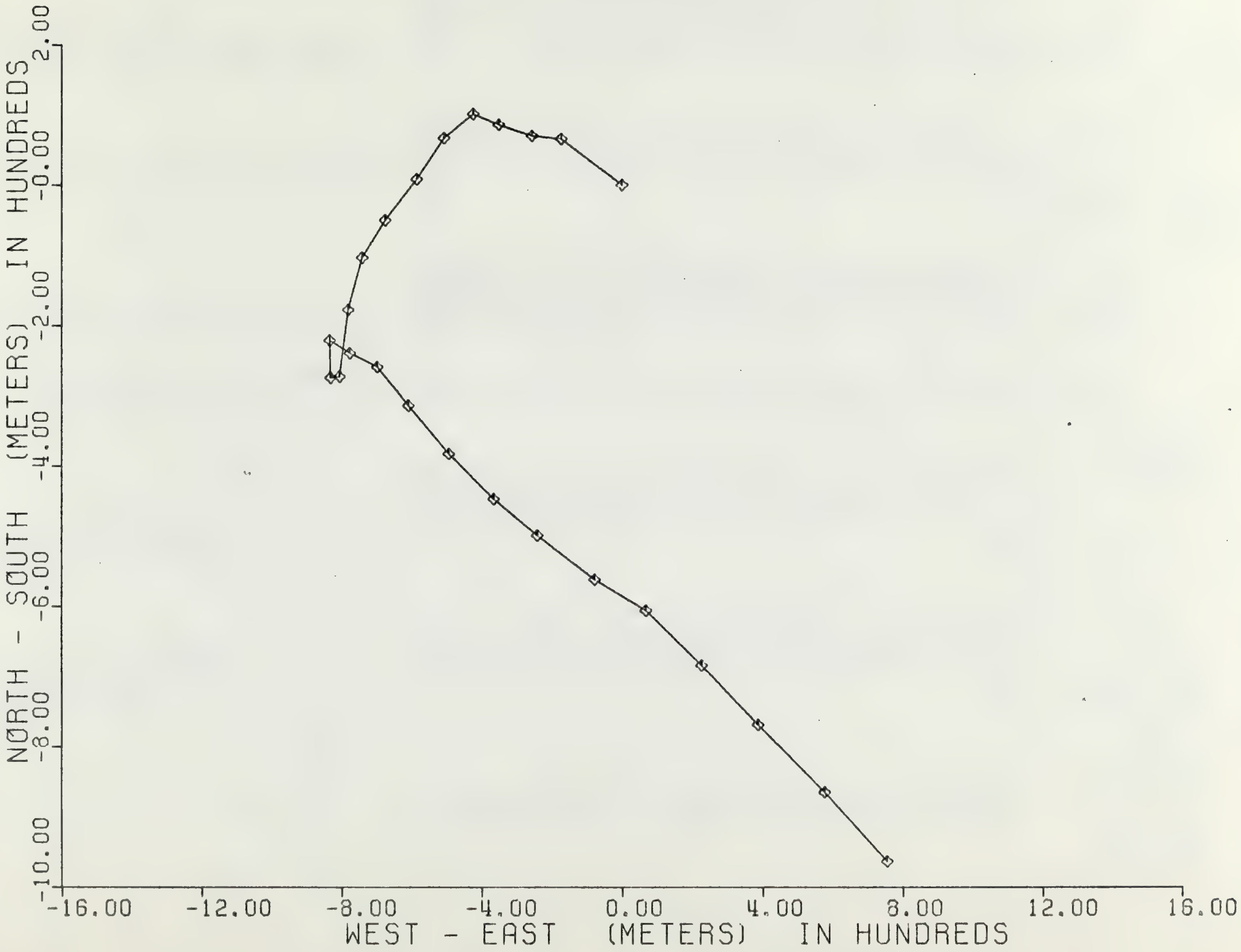
TEMPERATURE

C-B PIB. SOUNDING

TIME 645 DATE 7/14/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-14-78

BALLOON RELEASED 1315 MST


BASE LINE ANGLE             240.0
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                    THEODOLITE #1                THEODOLITE #2

   TIME        AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0             0.0        0.0            60.0       -0.0         0.0
   0.5           104.7       55.1            62.6        4.2        30.9
   1.0           112.0       58.1            64.7        9.7        29.2
   1.5           122.5       65.1            66.0       13.1        27.9
   2.0           141.2       70.1            68.0       19.0        27.0
   2.5           161.1       71.0            69.8       23.1        26.1
   3.0           174.1       68.2            73.0       27.3        25.2
   3.5           177.5       62.0            77.4       29.5        24.6
   4.0           180.1       59.1            81.2       31.6        24.1
   4.5           181.3       54.6            85.1       32.8        23.5
   5.0           182.4       52.1            89.6       34.3        23.0
   5.5           184.9       49.9            93.2       35.7        22.8
   6.0           185.1       47.9            95.3       36.3        22.6
   6.5           184.3       48.1            98.8       37.6        22.4
   7.0           185.1       46.2           103.2       38.7        22.3
   7.5           186.3       44.7           107.6       39.6        21.9
   8.0           186.9       44.0           112.0       40.9        21.5
   8.5           187.2       45.1           114.5       42.5        21.1
   9.0           186.4       45.0           117.8       43.3        20.7
   9.5           184.1       44.3           119.2       42.6        20.3
  10.0           182.3       44.1           121.1       42.1        20.0
  10.5           182.1       43.4           123.6       42.5        19.6
  11.0           181.9       43.0           125.8       42.1        19.2
  11.5           182.4       42.9           128.2       42.6        18.8
  12.0           182.0       43.2           129.8       43.8        18.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1         3.6        5.5
     2        54.0        6.3
     3         8.4        6.6
     4        50.6        7.1
     5       100.1        7.3
     6       140.6        7.6
     7       101.0        7.8
     8       138.1        8.1
     9        80.1        8.3
    10       121.8        8.6
    11       133.7        8.7
    12        65.7        8.9
    13       144.8        9.4
    14       138.5        9.7
    15       164.3       10.0
```

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        16      185.5       10.5
        17      253.6       11.0
        18      266.2       11.7
        19      239.3       12.1
        20      286.7       12.7
        21      239.6       13.2
        22      308.8       13.6
        23      331.6       14.1
        24      252.5       14.8


            HEIGHT  DIRECTION   SPEED  TEMP
             FEET    DEGREES   FT/SEC DEG C

              519.     292.       11.1  30.9
             1082.     322.        5.8  29.2
             1445.      23.        6.2  27.9
             2038.      32.        8.9  27.0
             2401.      30.       10.8  26.1
             2764.      14.       13.4  25.2
             2916.       8.       12.9  24.6
             3098.      10.       11.7  24.1
             3152.       8.       12.1  23.5
             3303.      16.       11.0  23.0
             3384.      20.        8.4  22.8
             3404.       0.        7.4  22.6
             3657.       3.       10.0  22.4
             3785.      15.       11.6  22.3
             3902.      15.       11.5  21.9
             4124.      11.        8.9  21.5
             4430.       0.        8.3  21.1
             4714.     341.        9.8  20.7
             4832.     328.       10.1  20.3
             5025.     345.        9.8  20.0
             5208.     358.        9.2  19.6
             5328.       4.        8.5  19.2
             5527.       4.        8.3  18.8


            HEIGHT  DIRECTION   SPEED  TEMP
            METERS   DEGREES   M/SEC  DEG C

              158.     292.        3.4  30.9
              330.     322.        1.8  29.2
              440.      23.        1.9  27.9
              621.      32.        2.7  27.0
              732.      30.        3.3  26.1
              842.      14.        4.1  25.2
              889.       8.        3.9  24.6
              944.      10.        3.6  24.1
              961.       8.        3.7  23.5
             1007.      16.        3.4  23.0
             1032.      20.        2.6  22.8
             1038.       0.        2.3  22.6
             1115.       3.        3.0  22.4
             1154.      15.        3.5  22.3
             1189.      15.        3.5  21.9
             1257.      11.        2.7  21.5
             1350.       0.        2.5  21.1
             1437.     341.        3.0  20.7
             1473.     328.        3.1  20.3
             1532.     345.        3.0  20.0
             1587.     358.        2.8  19.6
             1624.       4.        2.6  19.2
             1685.       4.        2.5  18.8
```
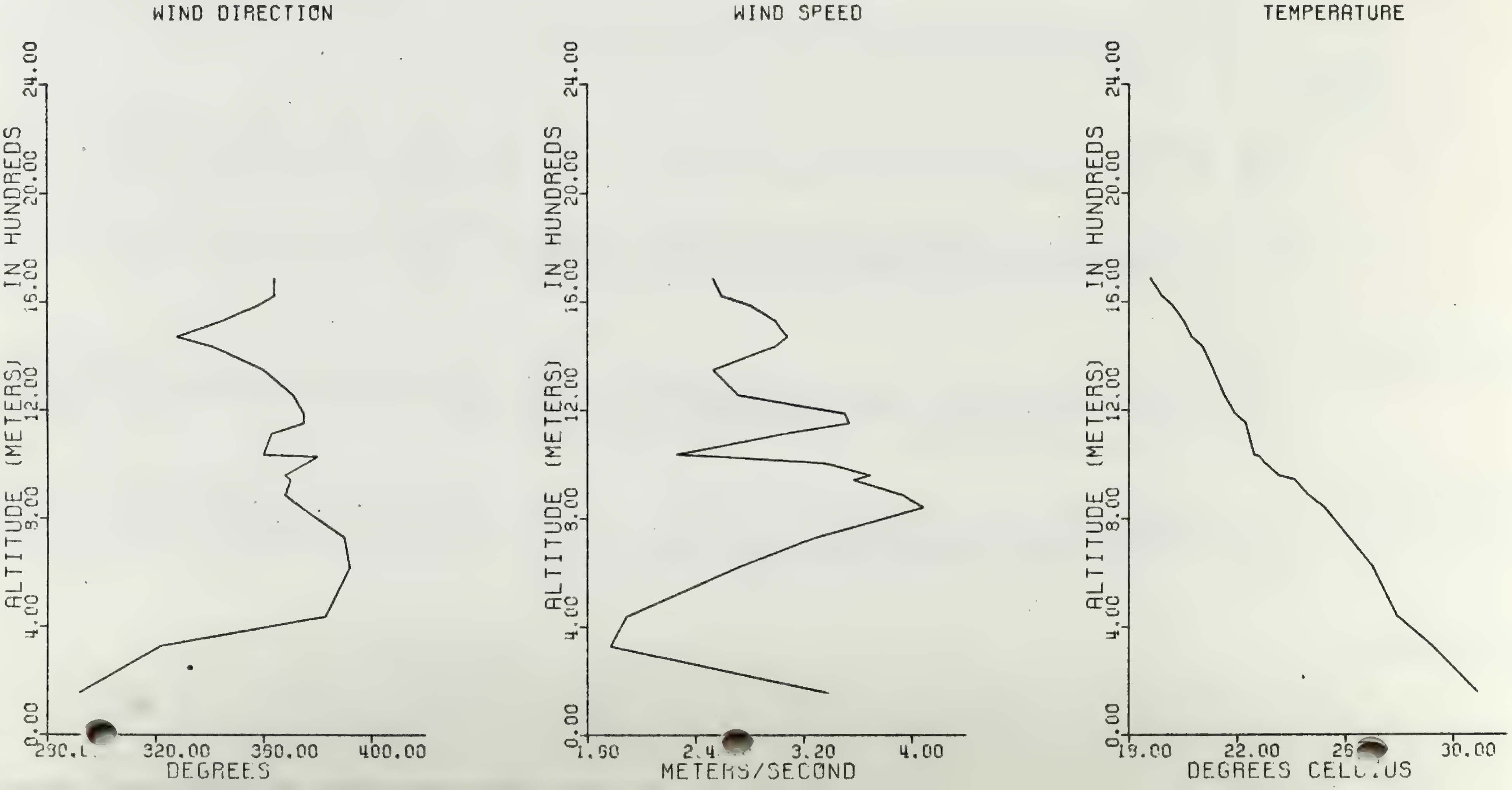

C-B PIBAL SOUNDING

TIME 1315   DATE 7/14/78

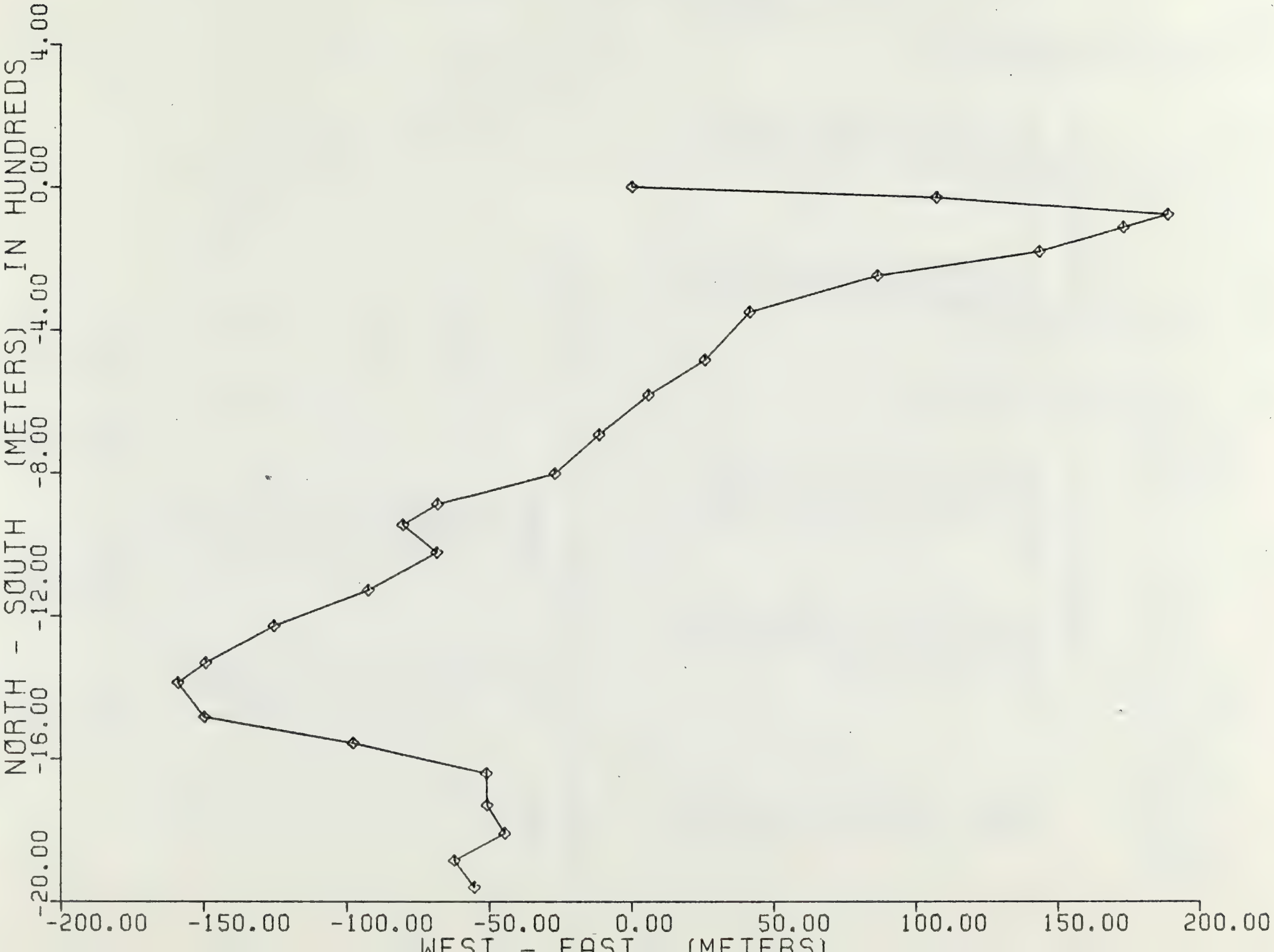


C-B PIBAL SOUNDING

TIME 1315 DATE 7/14/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-17-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE             240.0
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0       0.0             60.0      -0.0        0.0
   0.5        273.2      39.2             58.1       2.8       17.1
   1.0        285.5      32.6             54.6       5.4       17.2
   1.5        292.4      39.1             53.1       8.0       17.8
   2.0        303.2      49.4             52.4      10.9       17.4
   2.5        331.9      55.2             52.0      12.9       17.0
   3.0        345.6      55.6             51.2      14.8       16.6
   3.5        356.4      51.4             49.6      16.1       16.1
   4.0          2.6      45.4             47.1      17.2       15.3
   4.5          8.1      39.5             45.1      17.3       14.8
   5.0         12.4      34.6             43.5      17.1       14.5
   5.5         13.7      30.0             41.4      16.6       14.2
   6.0         16.0      25.6             39.5      15.9       13.9
   6.5         19.0      22.1             40.4      14.2       14.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       54.4       4.9
     2      111.6       5.1
     3      129.4       5.3
     4      121.6       5.7
     5      147.2       6.3
     6      157.6       6.8
     7      187.6       7.6
     8      237.6       8.5
     9      281.2       9.6
    10      321.4      10.9
    11      375.3      12.2
    12      433.7      14.0
    13      479.6      14.4


           HEIGHT  DIRECTION  SPEED  TEMP
            FEET    DEGREES   FT/SEC DEG C

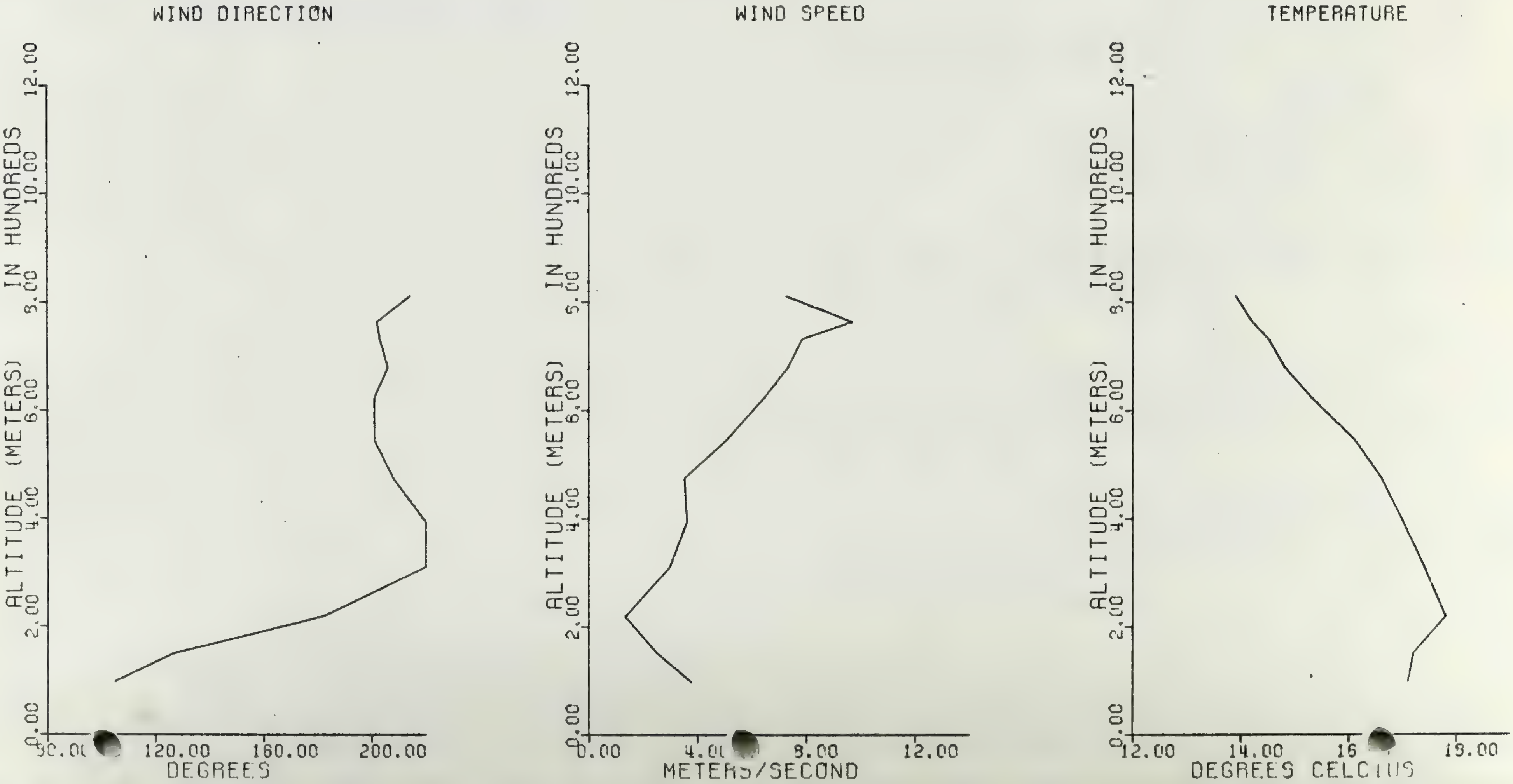
             322.    105.      12.4  17.1
             495.    127.       8.3  17.2
             720.    182.       4.4  17.8
            1020.    220.       9.8  17.4
            1295.    220.      11.9  17.0
            1559.    208.      11.6  16.6
            1794.    201.      16.7  16.1
            2049.    201.      21.2  15.3
```

2232.	206.	24.1	14.8
2403.	203.	25.8	14.5
2507.	202.	31.8	14.2
2660.	214.	23.9	13.9

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
98.	105.	3.8	17.1
151.	127.	2.5	17.2
219.	182.	1.3	17.8
311.	220.	3.0	17.4
395.	220.	3.6	17.0
475.	208.	3.5	16.6
547.	201.	5.1	16.1
625.	201.	6.5	15.3
680.	206.	7.3	14.8
733.	203.	7.9	14.5
764.	202.	9.7	14.2
811.	214.	7.3	13.9

C-B PIBAL SOUNDING

TIME 645 DATE 7/17/78

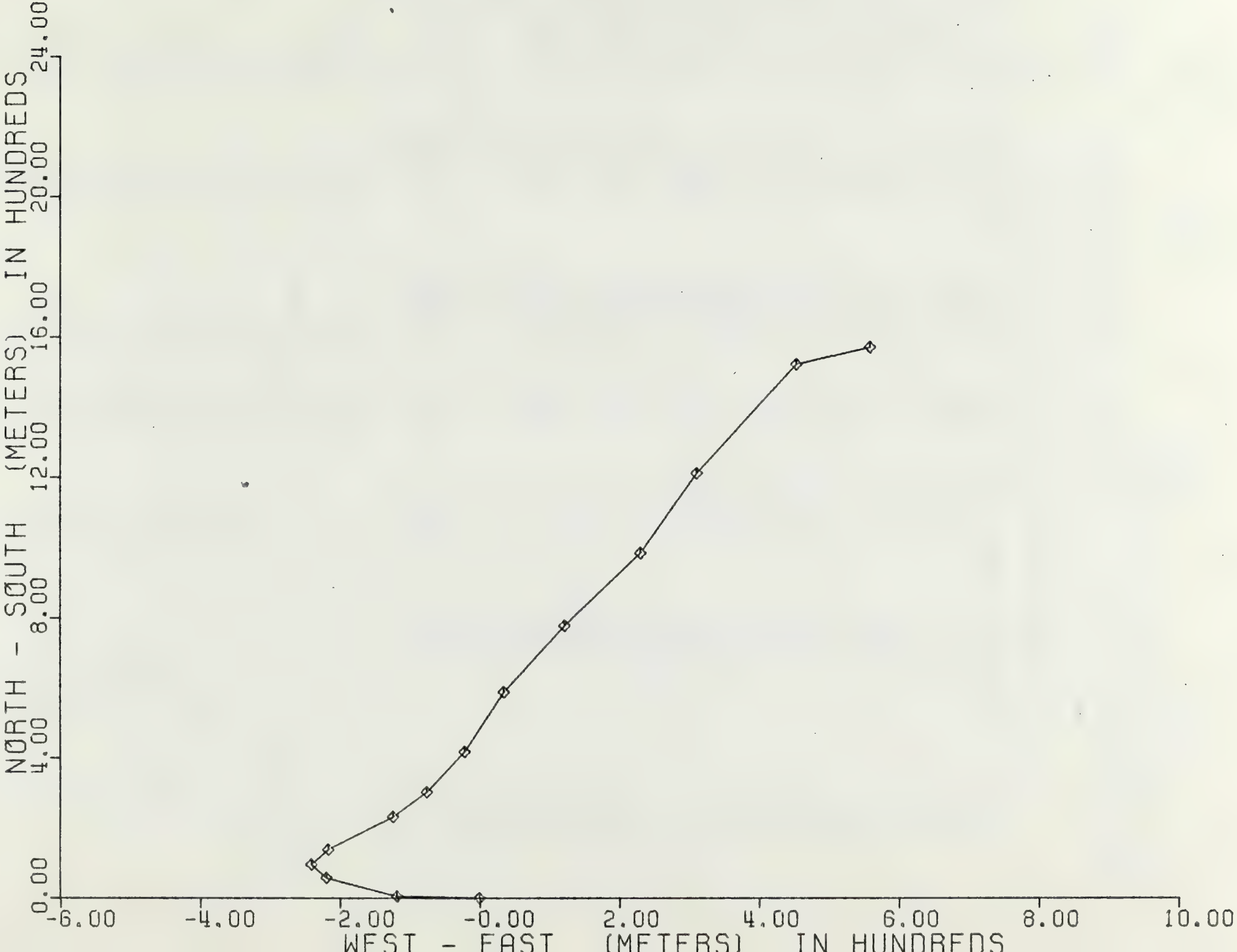


C-B PIB SØUNDING

TIME 645 DATE 7/17/78

PIBAL TRAJECTØRY - LAUNCH AT ØRIGIN

SYMBØL AT 30-SECØND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-17-78

BALLOON RELEASED 1315 MST


BASE LINE ANGLE              240.0
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                  THEODOLITE #1                  THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0            60.0       -0.0         0.0
   0.5          90.1       23.2            61.6        1.7        31.0
   1.0          71.1       23.3            61.1        4.8        30.0
   1.5          51.2       41.3            59.1        8.4        29.0
   2.0          35.0       39.3            55.3       10.2        28.0
   2.5          29.1       41.8            54.6       11.6        27.4
   3.0          20.2       42.3            52.9       12.7        26.8
   3.5          15.1       42.8            51.3       14.1        26.2
   4.0          10.5       43.1            49.1       16.8        25.7
   4.5          14.3       45.1            48.4       19.6        24.2
   5.0          18.4       44.6            46.9       21.9        22.7
   5.5          18.7       43.4            45.0       23.9        21.2
   6.0          17.0       42.3            42.5       25.4        19.7
   6.5          16.7       41.2            40.6       26.6        18.6
   7.0          15.9       40.6            39.0       27.5        17.3
   7.5          14.9       40.3            37.1       28.9        15.6
   8.0          14.2       39.4            35.5       29.4        13.9
   8.5          13.8       39.0            34.2       29.9        12.2
   9.0          14.1       38.1            33.4       30.1        11.4
   9.5          14.2       37.5            32.3       29.9        10.6
  10.0          13.7       37.1            31.7       29.8         9.9
  10.5          13.0       36.2            30.8       29.9         9.1
  11.0          13.1       35.4            30.1       29.8         8.4
  11.5          14.9       33.9            30.3       29.1         7.6
  12.0          15.8       32.9            30.9       28.4         7.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      101.8        5.5
     2      154.7        7.3
     3       82.5        7.2
     4      165.2        7.8
     5      190.0        7.9
     6      249.3        7.9
     7      276.2        8.1
     8      363.9        8.7
     9      371.8        9.3
    10      347.2       11.3
    11      414.4       12.9
    12      465.8       14.2
    13      529.4       15.8
    14      581.3       16.9
    15      673.8       18.5
  16     742.7        19.9
  17     772.5        21.2
  18     860.5        22.5
  19     790.1        23.9
  20     801.6        24.2
  21     942.6        24.9
  22    1004.8        26.1
  23    1080.0        28.0
  24    1133.4        27.8


          HEIGHT  DIRECTION  SPEED   TEMP
           FEET    DEGREES   FT/SEC DEG C

            201.    250.       23.2  31.0
            614.    213.       14.9  30.0
           1066.    151.       14.3  29.0
           1266.    164.       10.2  28.0
           1419.    128.        6.6  27.4
           1498.    136.        7.1  26.8
           1662.    162.        8.8  26.2
           2006.    194.       11.3  25.7
           2533.    213.       18.6  24.2
           3168.    207.       23.6  22.7
           3751.    194.       23.1  21.2
           4261.    192.       24.0  19.7
           4807.    192.       22.2  18.6
           5231.    188.       22.0  17.3
           5862.    187.       23.8  15.6
           6283.    188.       21.8  13.9
           6726.    193.       21.9  12.2
           7112.    196.       23.9  11.4
           7507.    189.       15.8  10.6
           7559.    176.       10.6   9.9
           7701.    187.       17.6   9.1
           7984.    206.       28.3   8.4
           8297.    220.       19.6   7.6


          HEIGHT  DIRECTION  SPEED   TEMP
          METERS   DEGREES   M/SEC  DEG C

             61.    250.        7.1  31.0
            187.    213.        4.5  30.0
            325.    151.        4.4  29.0
            386.    164.        3.1  28.0
            432.    128.        2.0  27.4
            457.    136.        2.2  26.8
            507.    162.        2.7  26.2
            611.    194.        3.4  25.7
            772.    213.        5.7  24.2
            966.    207.        7.2  22.7
           1143.    194.        7.0  21.2
           1299.    192.        7.3  19.7
           1465.    192.        6.8  18.6
           1594.    188.        6.7  17.3
           1787.    187.        7.3  15.6
           1915.    188.        6.6  13.9
           2050.    193.        6.7  12.2
           2168.    196.        7.3  11.4
           2288.    189.        4.8  10.6
           2304.    176.        3.2   9.9
           2347.    187.        5.4   9.1
           2434.    206.        8.6   8.4
           2529.    220.        6.0   7.6
```
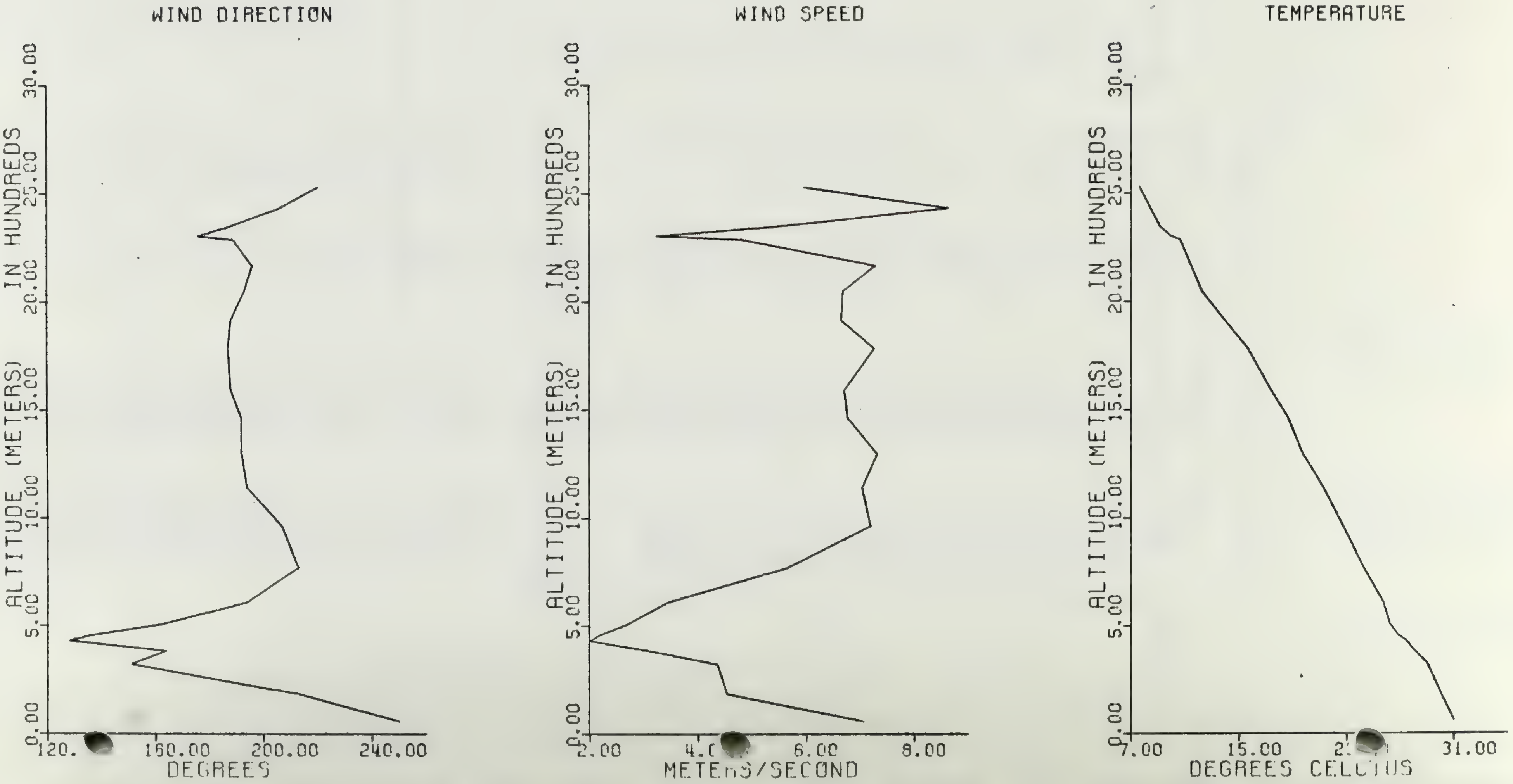

C-B PIBAL SOUNDING

TIME 1315   DATE 7/17/78


WIND DIRECTION

WIND SPEED

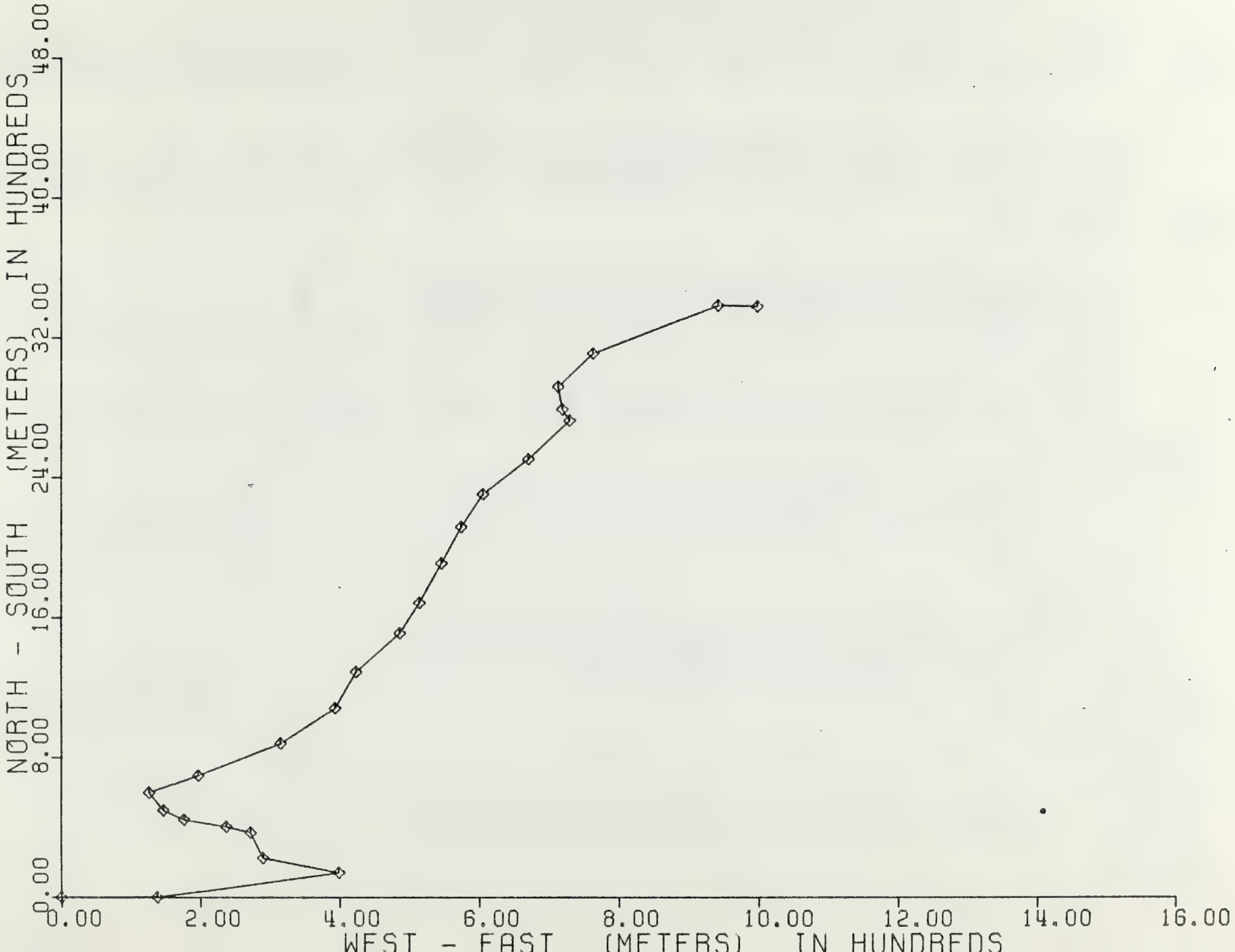
TEMPERATURE

C-B PIB . SOUNDING

TIME 1315 DATE 7/17/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-19-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE              240.0
BASE LINE LENGTH (FT)       5426.5
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)        100.0


                THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0          60.0       -0.0        0.0
   0.5         302.2       36.1          57.8        2.0       15.5
   1.0         311.2       25.0          52.3        4.1       18.2
   1.5         309.0       22.7          45.9        6.9       18.7
   2.0         305.5       22.0          38.8       10.0       19.2
   2.5         305.5       22.2          32.2       12.9       19.3
   3.0         307.3       22.7          26.2       15.5       19.0
   3.5         312.0       22.7          20.6       17.3       18.6
   4.0         316.5       22.7          15.9       18.7       18.1
   4.5         320.4       22.7          13.0       19.3       17.5
   5.0         324.1       22.6          11.0       19.6       16.8
   5.5         328.3       22.0          10.0       19.6       16.1
   6.0         332.3       21.7           9.8       19.4       15.5
   6.5         336.4       21.2          10.0       18.9       14.8
   7.0         340.5       20.9          11.0       18.6       14.2
   7.5         345.5       20.2          12.3       18.1       13.7
   8.0         349.5       19.5          14.0       17.6       13.3
   8.5         354.8       18.8          16.2       17.1       13.0
   9.0         358.6       18.5          17.9       16.9       12.8
   9.5           3.1       18.0          20.0       16.6       12.6
  10.0           6.3       17.9          21.9       16.5       12.4
  10.5           9.8       17.9          23.9       16.3       12.2
  11.0          12.8       17.8          25.7       16.1       11.7
  11.5          16.9       17.8          27.5       16.2       11.0
  12.0          17.5       17.7          29.3       16.2       10.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      90.5       4.9
     2     116.3       5.3
     3     146.2       5.8
     4     162.3       6.3
     5     180.3       6.8
     6     206.8       7.6
     7     254.2       8.6
     8     310.6       9.8
     9     338.6      11.0
    10     365.6      12.2
    11     442.6      13.5
    12     474.3      14.8
    13     487.1      16.1
    14     519.9      17.4
    15     577.6      19.1
```

16	640.6	20.2
17	708.9	22.1
18	755.0	23.6
19	820.2	25.7
20	851.1	26.8
21	820.7	28.3
22	804.9	29.6
23	818.7	34.1
24	933.3	29.8

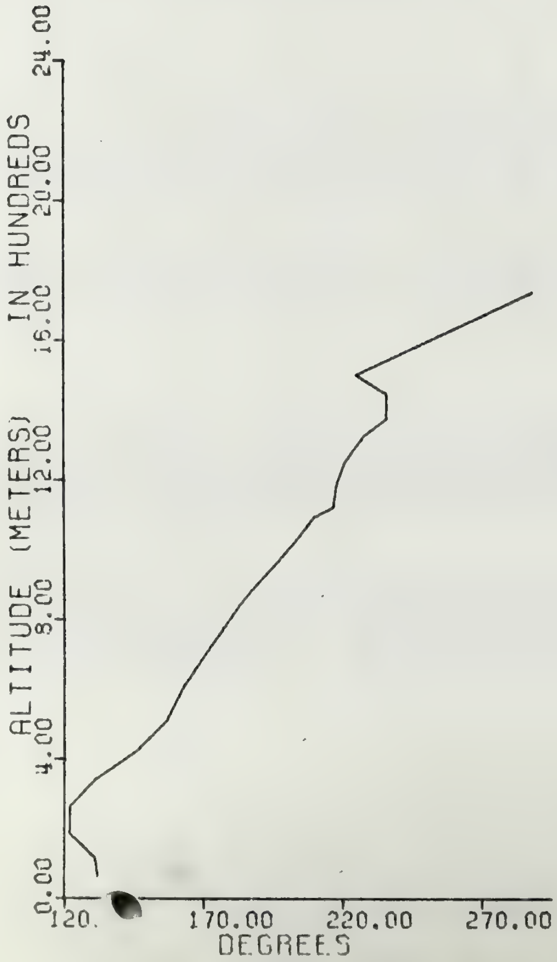
HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
220.	132.	13.1	15.5
385.	131.	18.1	18.2
612.	122.	20.5	18.7
864.	122.	20.1	19.2
1120.	131.	18.5	19.3
1390.	146.	20.3	19.0
1678.	157.	24.1	18.6
1997.	163.	24.2	18.1
2269.	170.	23.3	17.5
2529.	177.	24.7	16.8
2758.	183.	25.7	16.1
2977.	190.	27.0	15.5
3174.	197.	27.6	14.8
3363.	203.	32.5	14.2
3590.	210.	32.8	13.7
3681.	217.	35.7	13.3
3892.	218.	39.1	13.0
4103.	221.	40.5	12.8
4362.	228.	37.2	12.6
4515.	236.	33.0	12.4
4750.	236.	35.1	12.2
4930.	225.	59.1	11.7
5695.	288.	19.5	11.0

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
67.	132.	4.0	15.5
117.	131.	5.5	18.2
186.	122.	6.2	18.7
263.	122.	6.1	19.2
341.	131.	5.6	19.3
424.	146.	6.2	19.0
511.	157.	7.3	18.6
609.	163.	7.4	18.1
692.	170.	7.1	17.5
771.	177.	7.5	16.8
841.	183.	7.8	16.1
907.	190.	8.2	15.5
968.	197.	8.4	14.8
1025.	203.	9.9	14.2
1094.	210.	10.0	13.7
1122.	217.	10.9	13.3
1186.	218.	11.9	13.0
1251.	221.	12.3	12.8
1329.	228.	11.3	12.6
1376.	236.	10.1	12.4
1448.	236.	10.7	12.2
1503.	225.	18.0	11.7
1736.	288.	5.9	11.0

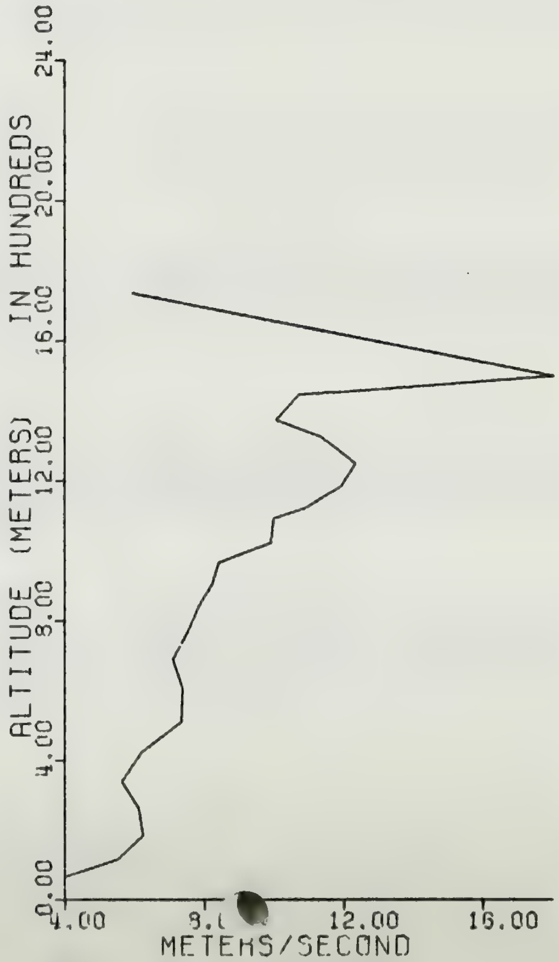
C-B PIBAL SOUNDING

TIME 650   DATE 7/19/78

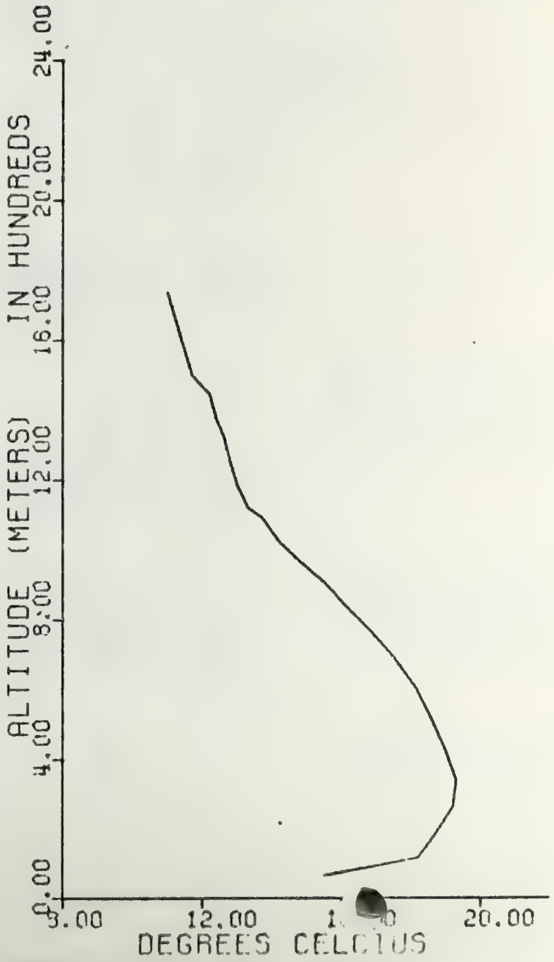
WIND DIRECTION



WIND SPEED



TEMPERATURE

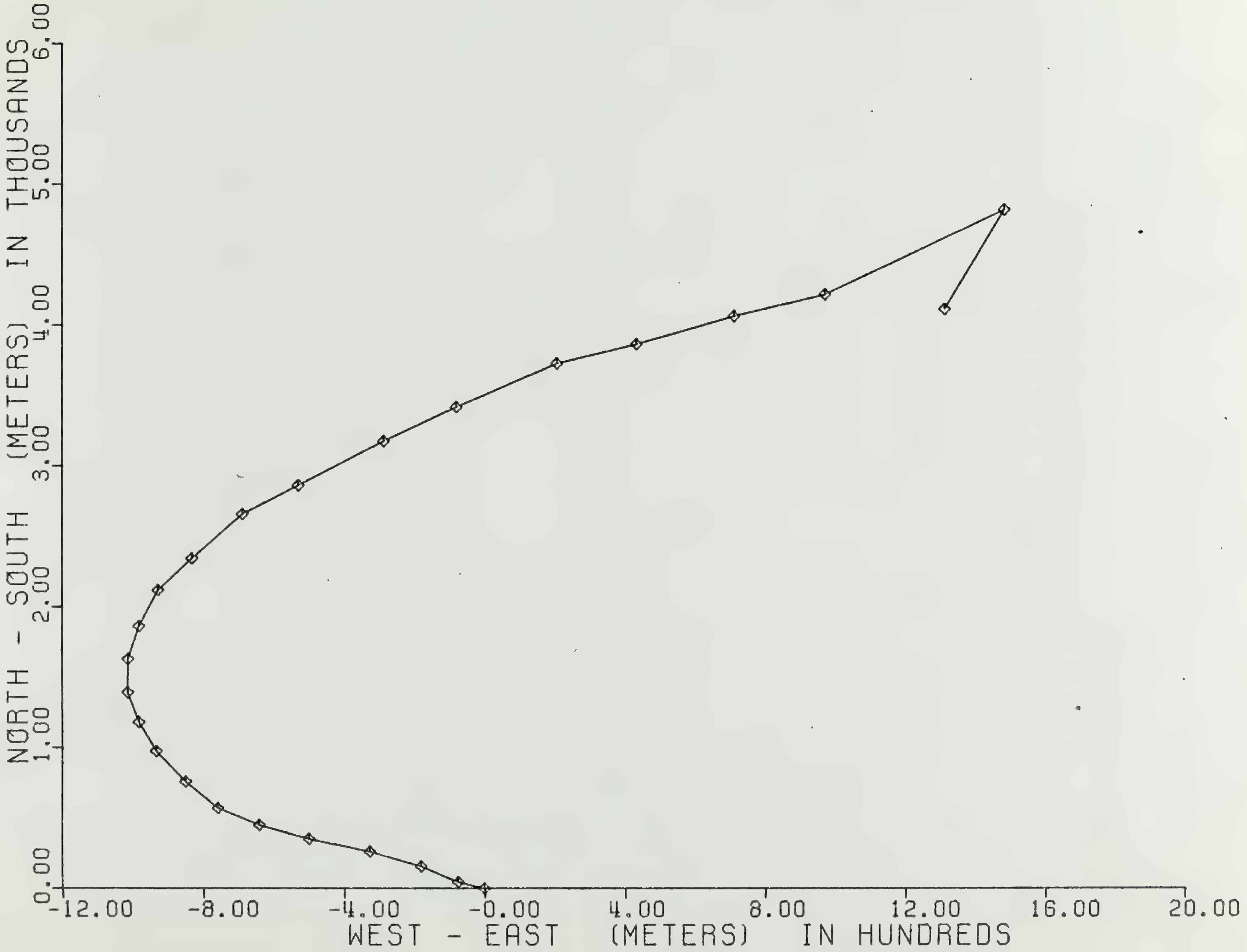


C-B PIB SOUNDING

TIME 650 DATE 7/19/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-19-78                                        ** SUSPECT DATA **

BALLOON RELEASED 1345 MST


BASE LINE ANGLE             240.0
BASE LINE LENGTH (FT)      5426.5
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)       100.0


                THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0      0.0             60.0     -0.0          0.0
   0.5         25.1      8.2             53.8      2.0         28.1
   1.0         25.1      8.9             50.4      3.5         26.9
   1.5         22.7     10.2             46.2      4.7         26.4
   2.0         20.5      8.9             43.5      5.3         25.9
   2.5         20.0      6.9             40.5      5.2         25.6
   3.0         21.0      5.9             39.5      4.8         25.4
   3.5         22.3      4.8             39.1      4.0         25.3
   4.0         23.4      3.2             38.6      3.6         25.1
   4.5         24.1      3.5             38.0      3.9         25.0
   5.0         24.6      3.7             37.8      4.2         24.8
   5.5         25.1      4.2             37.4      4.6         24.7
   6.0         25.1      4.3             37.0      4.8         24.5
   6.5         25.0      4.9             36.3      5.3         24.4
   7.0         25.6      4.9             36.7      5.3         24.2
   7.5         26.7      4.9             36.9      5.4         24.1
   8.0         27.2      4.7             37.1      5.4         23.9
   8.5         28.1      4.9             37.0      5.1         23.6
   9.0         28.3      4.3             37.0      5.3         23.0
   9.5         29.1      5.0             37.2      5.7         22.4
  10.0         29.7      5.1             37.2      5.8         21.8
  10.5         29.9      5.8             37.1      6.3         21.2
  11.0         29.9      6.2             37.0      6.8         20.6
  11.5         30.1      6.9             36.9      7.2         20.1
  12.0         30.1      7.0             36.9      7.4         19.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      145.8        6.8
     2      206.6        8.4
     3      187.0       10.3
     4      295.7       11.4
     5      377.0       13.4
     6      382.4       14.8
     7      339.0       16.0
     8      453.2       17.3
     9      484.2       18.9
    10      528.6       19.7
    11      551.8       21.2
    12      588.8       22.0
    13      616.4       23.5
    14      618.6       23.5
    15      656.2       25.0
   16      701.9      25.2
   17      576.9      28.1
   18      786.8      27.7
   19      762.2      29.6
   20      785.7      31.5
   21      779.6      33.1
   22      853.3      33.4
   23      803.2      35.4
   24      851.1      35.2


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC  DEG C

          210.     205.      37.0  28.1
          396.     201.      34.5  26.9
          658.     195.      31.0  26.4
          730.     195.      32.0  25.9
          768.     201.      33.3  25.6
          765.     210.      25.1  25.4
          693.     212.      24.5  25.3
          592.     211.      27.8  25.1
          703.     210.      23.3  25.0
          784.     211.      21.9  24.8
          935.     208.      21.2  24.7
         1004.     204.      21.9  24.5
         1200.     211.      14.6  24.4
         1202.     228.      14.8  24.2
         1290.     224.      16.8  24.1
         1280.     217.      30.1  23.9
         1414.     216.      24.1  23.6
         1342.     223.      14.5  23.0
         1592.     218.      36.0  22.4
         1728.     215.      32.8  21.8
         2009.     212.      17.1  21.2
         2174.     213.      21.1  20.6
         2496.     213.      16.5  20.1


        HEIGHT  DIRECTION   SPEED  TEMP
        METERS   DEGREES    M/SEC  DEG C

           64.     205.      11.3  28.1
          121.     201.      10.5  26.9
          200.     195.       9.4  26.4
          223.     195.       9.8  25.9
          234.     201.      10.1  25.6
          233.     210.       7.7  25.4
          211.     212.       7.5  25.3
          180.     211.       8.5  25.1
          214.     210.       7.1  25.0
          239.     211.       6.7  24.8
          285.     208.       6.5  24.7
          306.     204.       6.7  24.5
          366.     211.       4.5  24.4
          366.     228.       4.5  24.2
          393.     224.       5.1  24.1
          390.     217.       9.2  23.9
          431.     216.       7.3  23.6
          409.     223.       4.4  23.0
          485.     218.      11.0  22.4
          527.     215.      10.0  21.8
          612.     212.       5.2  21.2
          663.     213.       6.4  20.6
          761.     213.       5.0  20.1
```
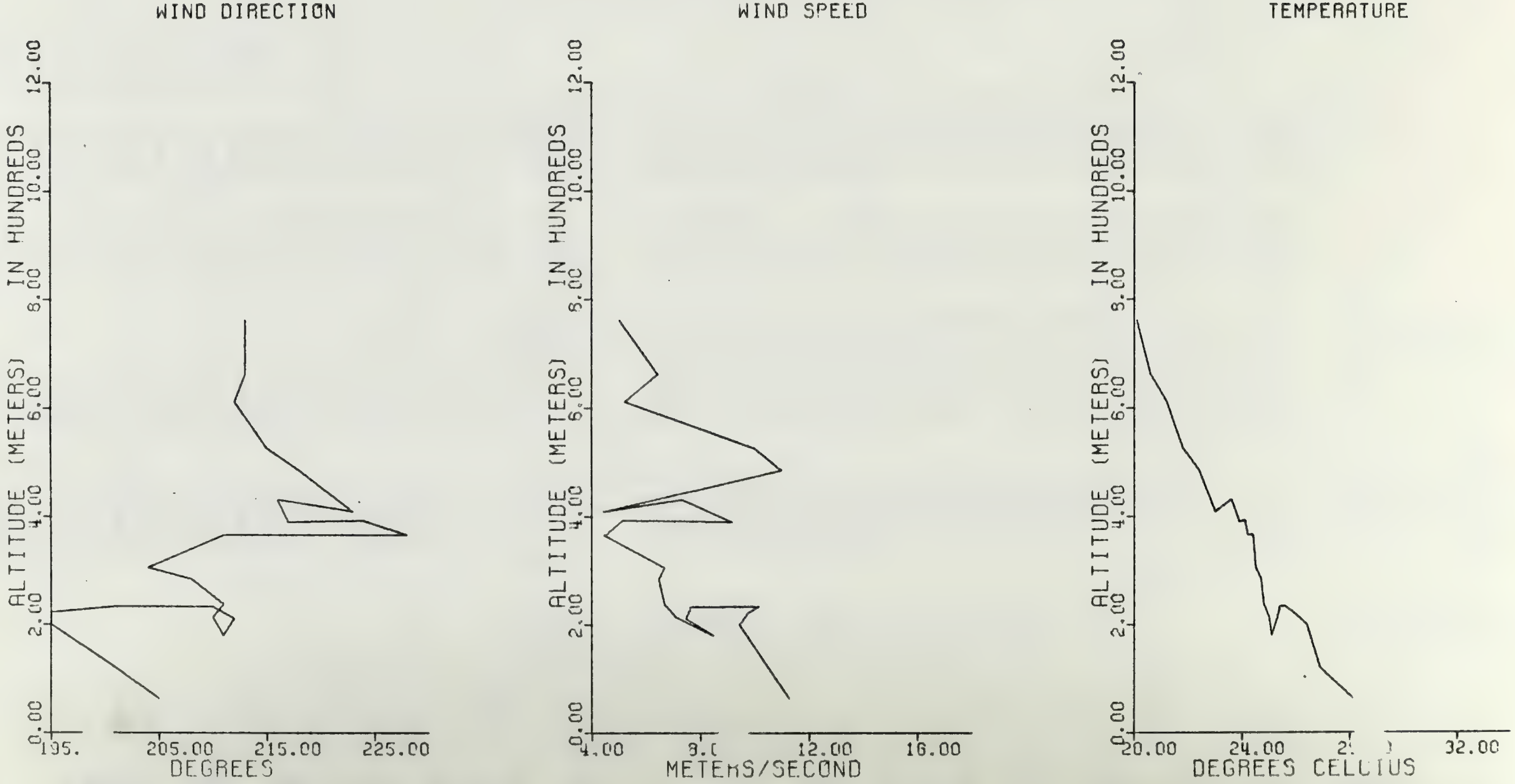

C-B PIBAL SOUNDING

TIME 1345   DATE 7/19/78

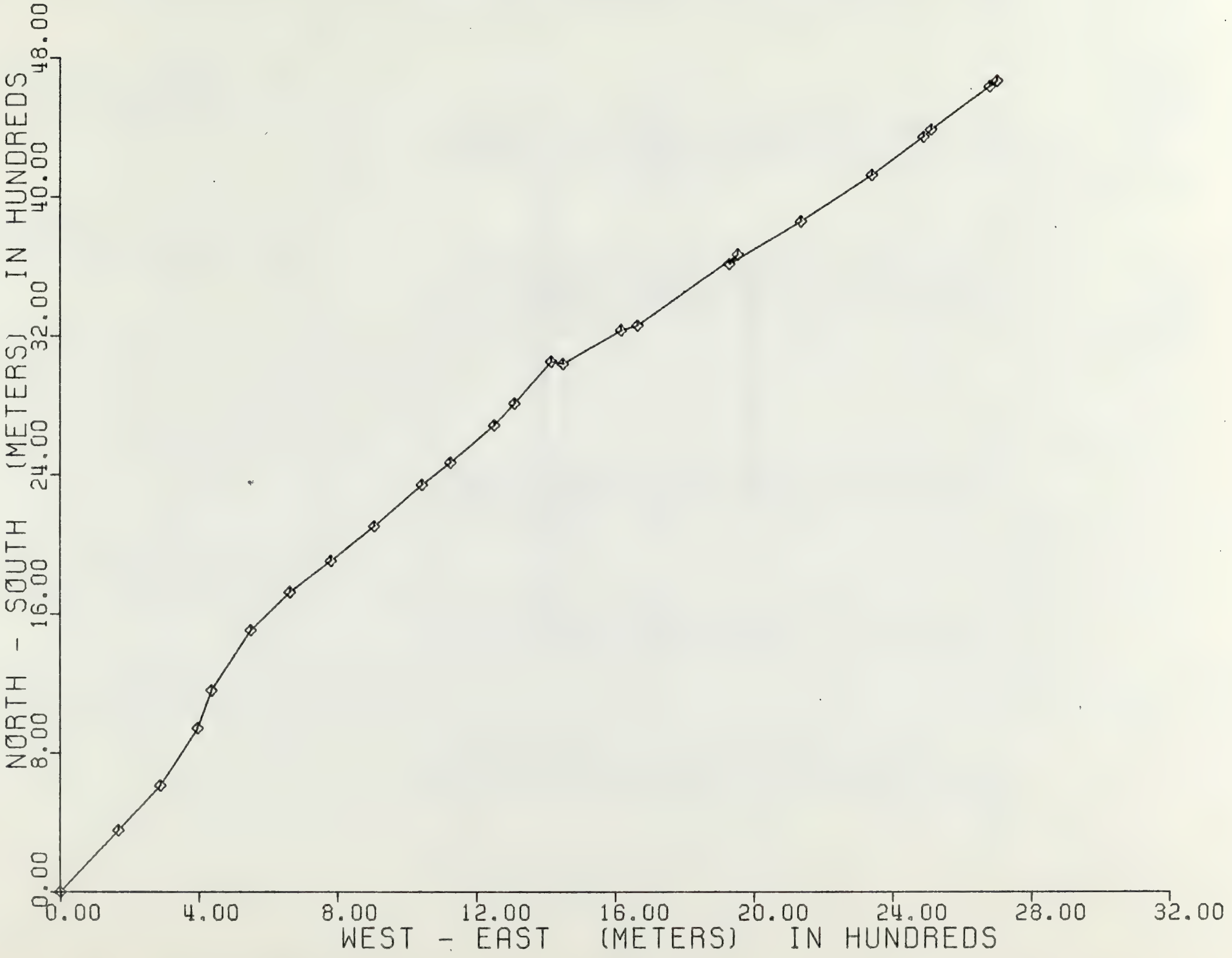


C-B PIB SOUNDING

TIME 1345 DATE 7/19/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-b PIBAL SOUNDING

TIME: 0650 DATE: 7/21/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON BEHIND OBSTRUCTIONS.

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C-B PIBAL SOUNDING

SOUNDING DATE  7-21-78

BALLOON RELEASED 1300 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                    THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0            42.5       -0.1         0.0
   0.5         141.1       47.2            46.3        4.5        26.5
   1.0         145.3       38.5            53.1        8.7        24.7
   1.5         136.3       41.8            59.7       13.9        23.7
   2.0         115.2       38.1            62.8       16.2        23.6
   2.5         107.6       39.6            64.5       17.9        23.5
   3.0         109.2       37.2            69.1       19.4        23.5
   3.5         107.5       36.8            72.7       20.9        22.8
   4.0         107.5       34.8            75.6       22.0        22.1
   4.5         103.1       33.5            76.8       22.1        21.4
   5.0          98.4       32.7            75.7       22.0        20.7
   5.5          94.3       30.3            74.5       21.2        20.0
   6.0          90.9       29.5            73.2       21.1        19.4
   6.5          87.9       27.9            71.9       20.7        18.8
   7.0          84.8       28.0            70.7       20.2        18.2
   7.5          82.7       27.6            69.7       20.5        17.6
   8.0          80.3       27.2            68.5       20.5        17.0
   8.5          77.8       26.7            67.0       20.7        16.4
   9.0          75.2       26.7            65.1       21.1        15.8
   9.5          72.0       26.7            62.9       20.9        15.1
  10.0          68.8       26.2            60.6       20.8        14.4
  10.5          65.6       25.5            58.5       20.7        13.6
  11.0          62.4       25.1            56.1       20.6        12.9
  11.5          59.0       24.7            54.4       20.4        12.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       25.7        4.6
     2       17.0        5.1
     3       58.3        6.1
     4       31.3        7.6
     5       81.6        8.7
     6       87.8        9.9
     7      187.6       11.4
     8       89.6       12.9
     9      157.7       15.0
    10      158.3       16.4
    11       48.5       17.9
    12        2.6       19.1
    13      136.2       20.4
    14       49.6       21.3
    15       45.7       22.7
    16       76.6       23.9
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 18     330.9      26.0
 19     295.8      26.4
 20     392.7      27.2
 21     488.8      29.0
 22     572.7      29.9
 23     424.1      34.8


          HEIGHT   DIRECTION   SPEED   TEMP
           FEET     DEGREES   FT/SEC  DEG C

            367.      326.       14.9   26.5
            714.      315.       18.3   24.7
           1260.      277.       23.7   23.7
           1675.      260.       24.7   23.6
           2096.      279.       19.8   23.5
           2450.      288.       25.2   23.5
           2970.      285.       27.0   22.8
           3360.      274.       31.8   22.1
           3869.      255.       32.5   21.4
           4182.      243.       30.3   20.7
           4332.      240.       29.1   20.0
           4568.      235.       27.0   19.4
           4706.      229.       24.3   18.8
           4878.      227.       22.9   18.2
           5177.      230.       25.2   17.6
           5426.      225.       27.0   17.0
           5714.      211.       24.0   16.4
           5927.      186.       21.1   15.8
           5983.      184.       24.2   15.1
           6097.      202.       33.2   14.4
           6421.      199.       34.0   13.6
           6542.      213.       57.9   12.9

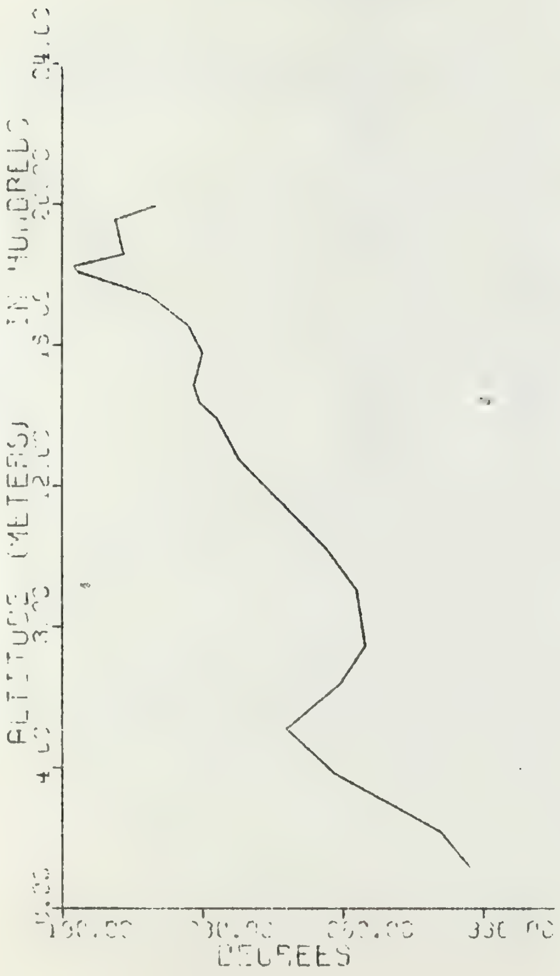

          HEIGHT   DIRECTION   SPEED   TEMP
          METERS    DEGREES    M/SEC  DEG C

            112.      326.        4.5   26.5
            218.      315.        5.6   24.7
            384.      277.        7.2   23.7
            511.      260.        7.5   23.6
            639.      279.        6.0   23.5
            747.      288.        7.7   23.5
            905.      285.        8.2   22.8
           1024.      274.        9.7   22.1
           1179.      255.        9.9   21.4
           1275.      243.        9.2   20.7
           1320.      240.        8.9   20.0
           1392.      235.        8.2   19.4
           1434.      229.        7.4   18.8
           1487.      227.        7.0   18.2
           1578.      230.        7.7   17.6
           1654.      225.        8.2   17.0
           1742.      211.        7.3   16.4
           1807.      186.        6.4   15.8
           1824.      184.        7.4   15.1
           1858.      202.       10.1   14.4
           1957.      199.       10.4   13.6
           1994.      213.       17.6   12.9
```

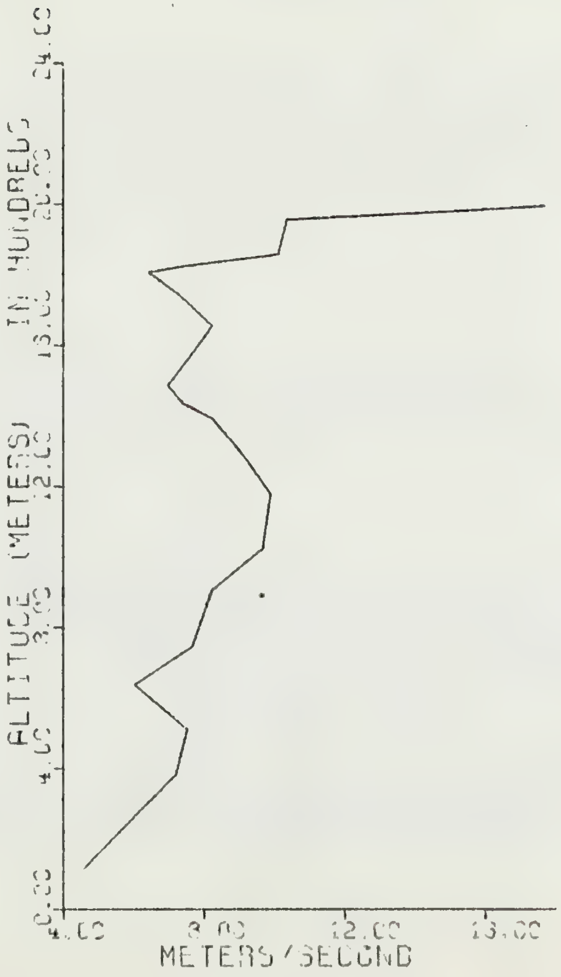
C-B PIBAL SOUNDING

TIME 1300 DATE 7/21/75

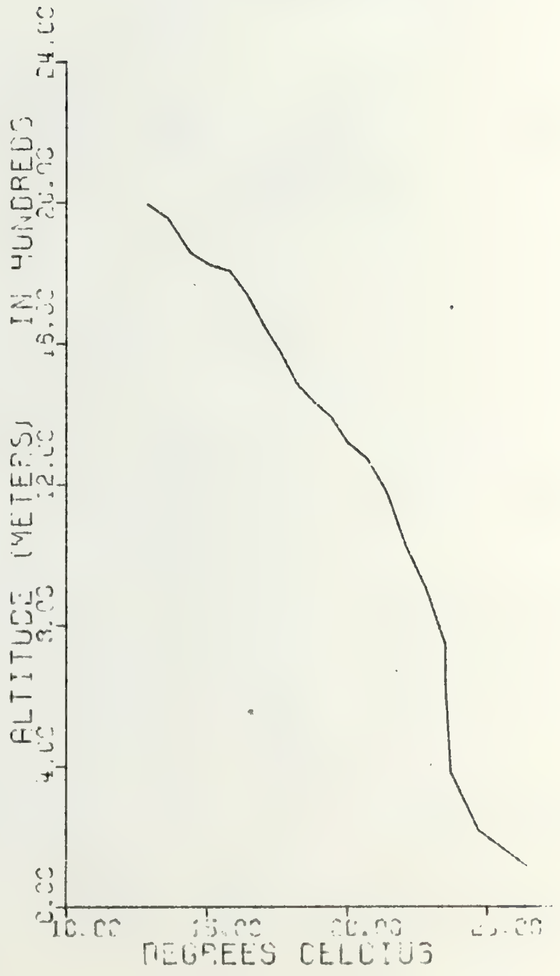
WIND DIRECTION



WIND SPEED



TEMPERATURE

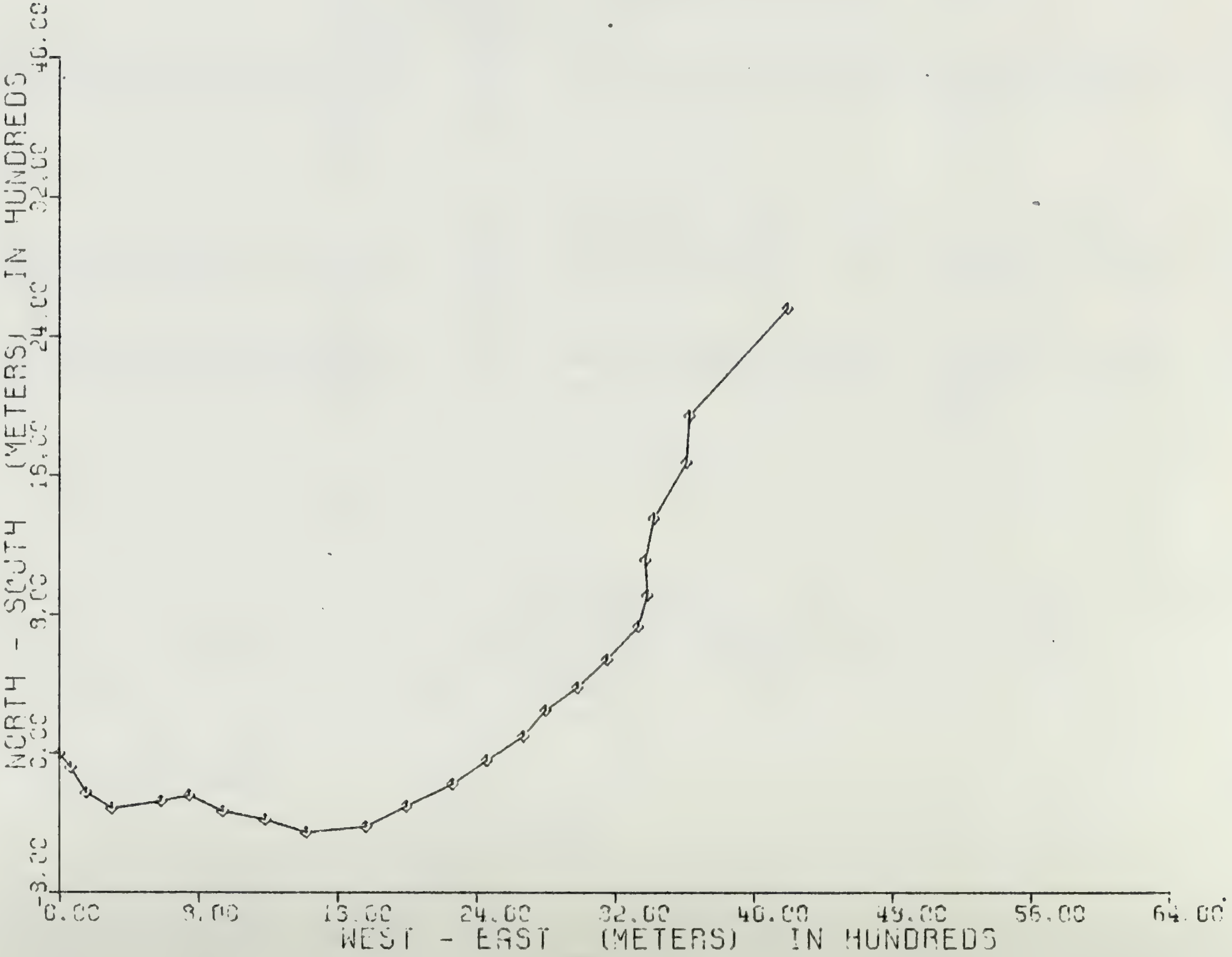


C-B PIBAL SOUNDING

TIME 1300   DATE 7/21/79

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-24-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE           222.5
BASE LINE LENGTH (FT)    4804.2
TIME INTERVAL (SEC)        30.0
BASE LINE HEIGHT (FT)       8.0


                THEODOLITE #1            THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0          42.5       -0.1        0.0
   0.5         277.1       35.2          35.5        4.7       19.6
   1.0         294.6       38.5          31.6        8.3       21.3
   1.5         315.8       41.5          28.8       11.5       22.0
   2.0         335.7       37.3          26.6       13.1       21.7
   2.5         353.1       32.7          26.2       14.3       21.4
   3.0           5.8       28.1          27.3       14.7       21.8
   3.5          12.0       25.9          27.6       15.3       21.8
   4.0          15.0       25.9          28.2       16.5       21.0
   4.5          16.9       26.9          28.6       17.9       19.8
   5.0          19.6       28.6          29.8       19.4       18.7
   5.5          21.7       30.3          30.9       20.9       17.6
   6.0          23.6       31.6          31.9       21.9       16.6
   6.5          24.5       32.7          32.4       23.1       15.7
   7.0          25.2       33.7          32.4       24.0       14.8
   7.5          25.4       34.5          32.6       24.9       13.9
   8.0          26.1       34.8          32.8       25.6       13.3
   8.5          26.6       34.7          33.1       26.0       12.8
   9.0          27.1       34.5          33.2       26.2       12.2
   9.5          27.7       34.3          33.4       26.6       11.4
  10.0          28.2       34.0          33.7       26.7       10.4
  10.5          29.0       33.7          34.0       26.8        9.4
  11.0          29.7       33.6          34.4       26.9        8.3
  11.5          30.1       33.4          34.7       27.1        7.3
  12.0          31.0       33.4          35.1       27.3        6.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       72.8        4.6
     2       37.0        5.1
     3       18.1        5.8
     4       30.9        7.0
     5       96.8        8.8
     6      175.2       11.0
     7      194.6       13.5
     8      267.6       15.2
     9      302.5       16.8
    10      307.0       18.0
    11      328.2       19.1
    12      310.6       19.8
    13      351.9       20.7
    14      285.2       21.8
    15      335.3       22.4
```
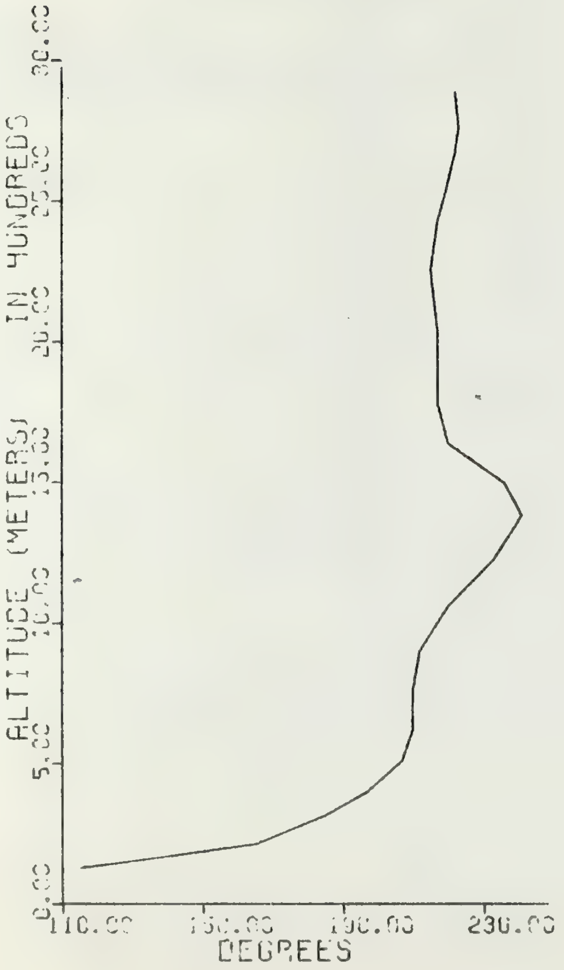

```
      17      409.5       24.8
      18      411.9       26.1
      19      451.7       27.9
      20      498.4       29.0
      21      491.2       30.8
      22      495.5       31.8
      23      565.7       33.2
      24      525.5       35.1


            HEIGHT  DIRECTION  SPEED  TEMP
             FEET    DEGREES   FT/SEC DEG C

              424.     115.     14.9  19.6
              704.     165.     13.2  21.3
             1039.     185.     19.9  22.0
             1317.     197.     29.6  21.7
             1677.     207.     39.8  21.4
             2035.     210.     45.5  21.8
             2503.     210.     38.9  21.8
             2961.     212.     28.4  21.0
             3476.     220.     23.0  19.8
             4018.     233.     18.6  18.7
             4535.     241.     14.0  17.6
             4911.     236.     12.2  16.6
             5369.     220.     13.8  15.7
             5836.     217.     10.7  14.8
             6166.     217.     14.0  13.9
             6668.     217.     19.3  13.3
             7023.     216.     19.0  12.8
             7389.     215.     25.4  12.2
             7965.     217.     24.4  11.4
             8260.     219.     24.5  10.4
             8761.     222.     24.0   9.4
             9064.     223.     20.0   8.3
             9459.     222.     26.8   7.3


            HEIGHT  DIRECTION  SPEED  TEMP
            METERS   DEGREES   M/SEC  DEG C

              129.     115.      4.5  19.6
              215.     165.      4.0  21.3
              317.     185.      6.1  22.0
              401.     197.      9.0  21.7
              511.     207.     12.1  21.4
              620.     210.     13.9  21.8
              763.     210.     11.9  21.8
              903.     212.      8.7  21.0
             1060.     220.      7.0  19.8
             1225.     233.      5.7  18.7
             1382.     241.      4.3  17.6
             1497.     236.      3.7  16.6
             1637.     220.      4.2  15.7
             1779.     217.      3.3  14.8
             1879.     217.      4.3  13.9
             2032.     217.      5.9  13.3
             2141.     216.      5.8  12.8
             2252.     215.      7.7  12.2
             2428.     217.      7.4  11.4
             2518.     219.      7.5  10.4
             2670.     222.      7.3   9.4
             2763.     223.      6.1   8.3
             2883.     222.      8.2   7.3
```

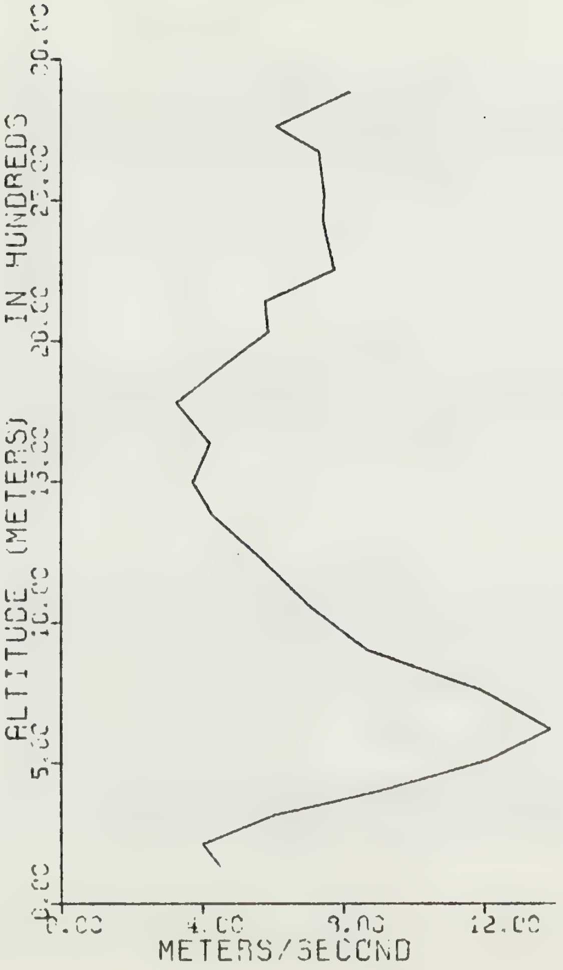
C-B PIBAL SOUNDING

TIME 845   DATE 7/24/78

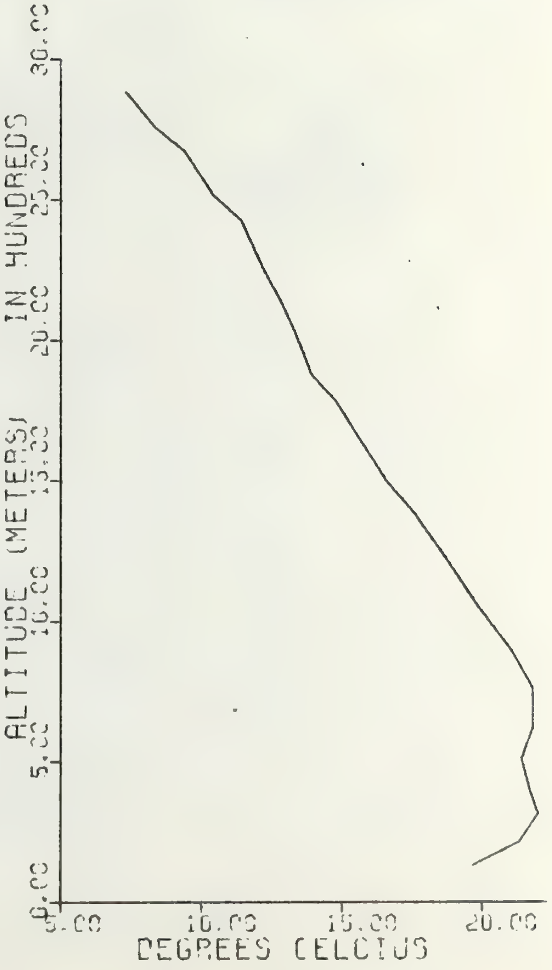
WIND DIRECTION



WIND SPEED



TEMPERATURE

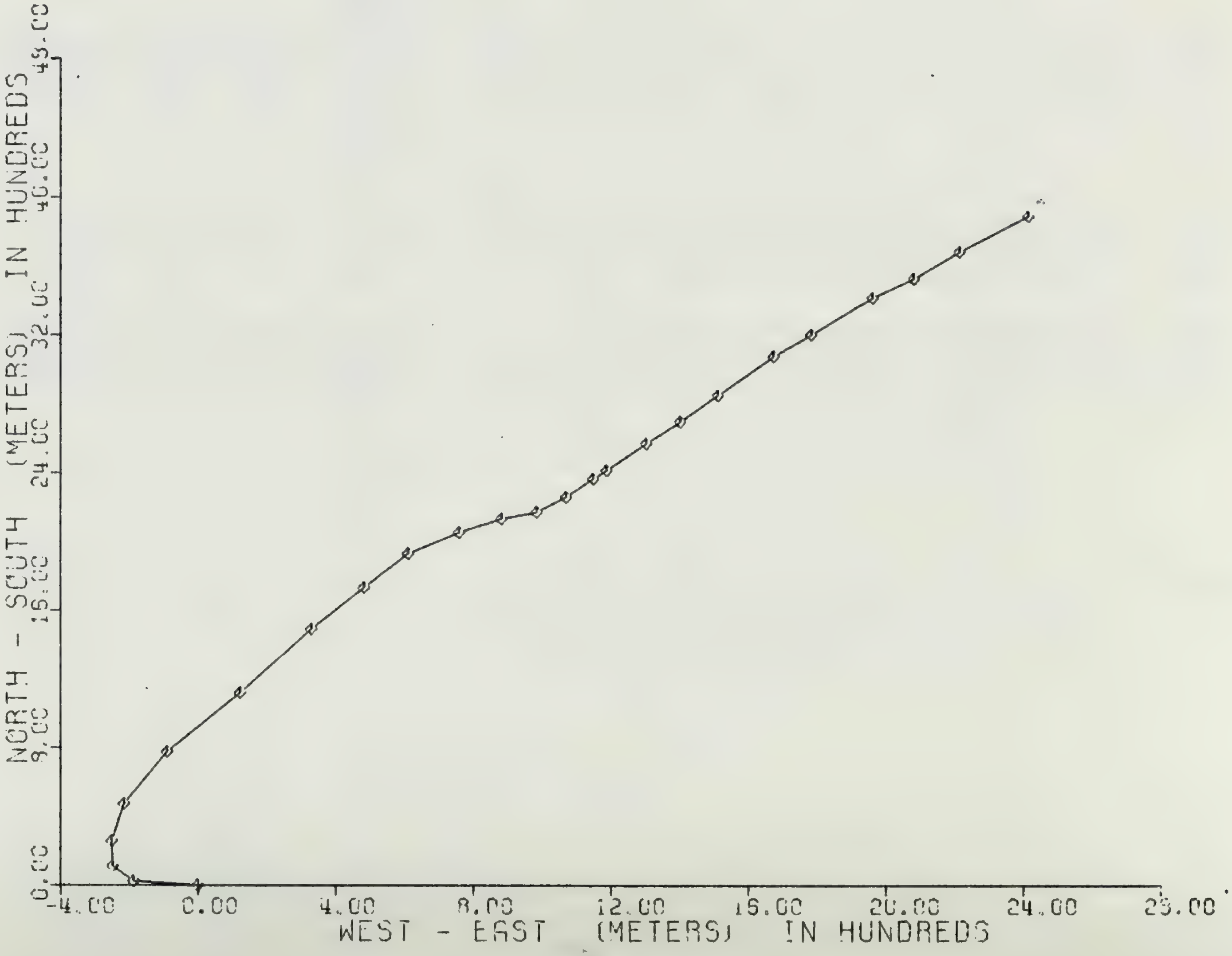


C-B PIBAL SOUNDING

TIME 645   DATE 7/24/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

SOUNDING DATE 7-24-78

BALLOON RELEASED 1315 MST

BASE LINE ANGLE	222.5
BASE LINE LENGTH (FT)	4804.2
TIME INTERVAL (SEC)	30.0
BASE LINE HEIGHT (FT)	8.0

	THEODOLITE #1		THEODOLITE #2		
TIME	AZIMUTH	ELEVATION	AZIMUTH	ELEVATION	TEMP (DEG.C)
0.0	0.0	0.0	42.5	-0.1	0.0
0.5	122.0	41.5	45.9	3.9	28.0
1.0	116.8	41.7	52.0	8.9	26.6
1.5	113.6	40.9	58.0	13.2	25.4
2.0	112.4	42.5	61.9	17.4	24.2
2.5	110.5	46.2	63.7	21.3	22.6
3.0	108.2	50.3	65.6	25.0	20.7
3.5	106.0	52.8	66.5	29.4	18.7
4.0	101.9	55.0	66.7	32.4	16.8
4.5	99.3	56.1	67.4	35.0	14.9
5.0	94.9	56.7	67.5	36.8	12.9
5.5	92.2	56.5	68.0	38.1	11.0
6.0	90.8	56.9	68.6	39.2	9.1
6.5	88.9	55.6	68.6	39.8	7.2
7.0	87.2	55.8	68.5	39.6	6.5
7.5	86.4	54.3	68.8	39.2	5.8
8.0	85.6	52.9	69.1	39.0	5.1
8.5	84.3	52.8	68.9	38.8	4.5
9.0	82.7	51.1	68.7	38.4	3.9
9.5	82.6	50.0	69.2	37.9	3.3
10.0	83.0	48.3	69.7	37.4	2.8
10.5	83.4	48.5	70.4	37.4	2.2
11.0	83.8	47.9	71.2	37.2	1.6
11.5	84.5	47.2	72.1	36.8	1.1
12.0	84.8	46.5	72.6	36.8	0.5

COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

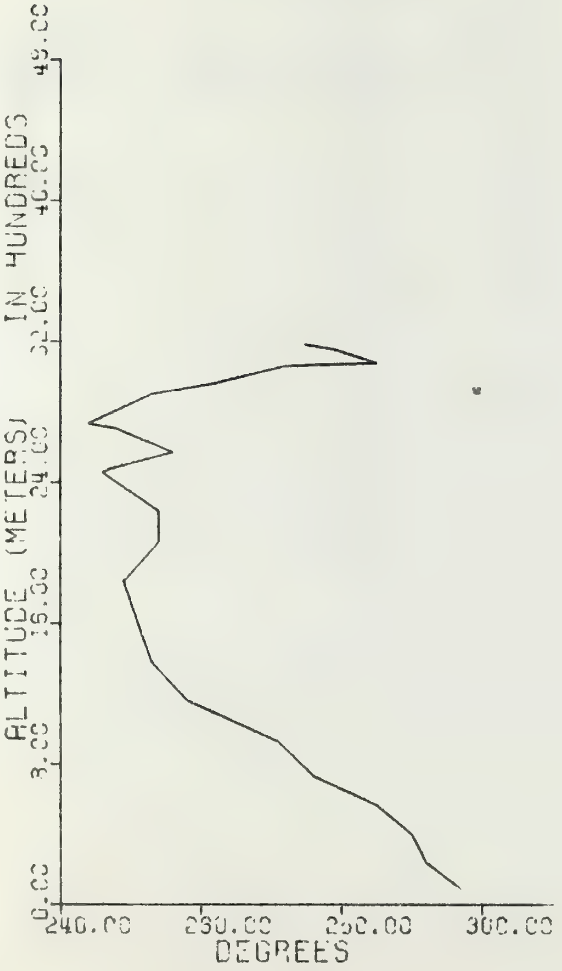
TIME	RHO	ERROR
1	59.6	4.7
2	20.3	5.6
3	35.2	6.7
4	39.1	7.7
5	62.8	8.6
6	195.8	9.6
7	128.0	10.9
8	161.5	12.1
9	173.4	13.5
10	232.1	15.0
11	261.4	16.6
12	341.4	17.7
13	227.3	19.5
14	374.2	19.7
15	333.9	20.7

```
17      370.8       22.3
18      300.4       24.0
19      308.3       24.8
20      162.5       26.2
21      280.7       26.2
22      316.8       27.1
23      354.3       27.6
24      284.2       28.8


         HEIGHT   DIRECTION   SPEED  TEMP
          FEET     DEGREES   FT/SEC DEG C

           300.      297.      14.8  28.0
           797.      292.      20.1  26.6
          1317.      290.      19.3  25.4
          1856.      285.      13.5  24.2
          2408.      276.       9.9  22.6
          3049.      271.      10.8  20.7
          3815.      258.      11.7  18.7
          4526.      253.      12.6  16.8
          5266.      251.      15.4  14.9
          6035.      249.      18.1  12.9
          6769.      254.      15.2  11.0
          7345.      254.      17.8   9.1
          8058.      246.      13.6   7.2
          8131.      247.      10.5   6.5
          8438.      256.      19.7   5.8
          8878.      248.      13.2   5.1
          8971.      244.      17.4   4.5
          9521.      253.      22.7   3.9
          9726.      262.      20.4   3.3
         10049.      272.      12.9   2.8
         10100.      285.       8.3   2.2
         10349.      279.      13.3   1.6
         10442.      275.      15.9   1.1


         HEIGHT   DIRECTION   SPEED  TEMP
         METERS    DEGREES    M/SEC  DEG C

            91.      297.       4.5  28.0
           243.      292.       6.1  26.6
           401.      290.       5.9  25.4
           566.      285.       4.1  24.2
           734.      276.       3.0  22.6
           929.      271.       3.3  20.7
          1163.      258.       3.6  18.7
          1380.      253.       3.3  16.8
          1605.      251.       4.7  14.9
          1839.      249.       5.5  12.9
          2063.      254.       4.6  11.0
          2239.      254.       5.4   9.1
          2456.      246.       4.1   7.2
          2478.      247.       3.2   6.5
          2572.      256.       6.0   5.8
          2706.      248.       4.0   5.1
          2734.      244.       5.3   4.5
          2902.      253.       6.9   3.9
          2964.      262.       6.2   3.3
          3063.      272.       3.9   2.8
          3078.      285.       2.5   2.2
          3155.      279.       4.1   1.6
          3183.      275.       4.8   1.1
```

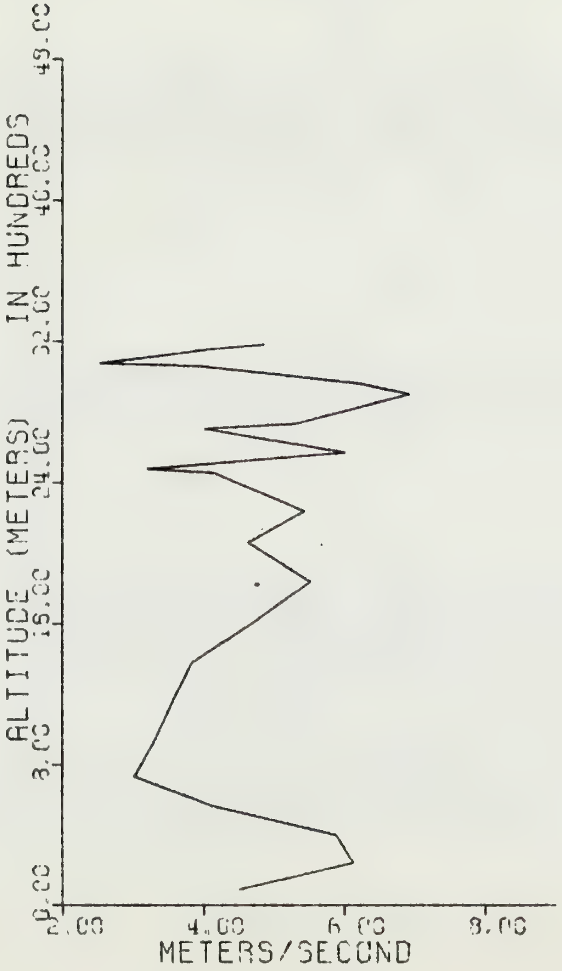
C-B PIBAL SOUNDING

TIME 1315   DATE 7/24/78

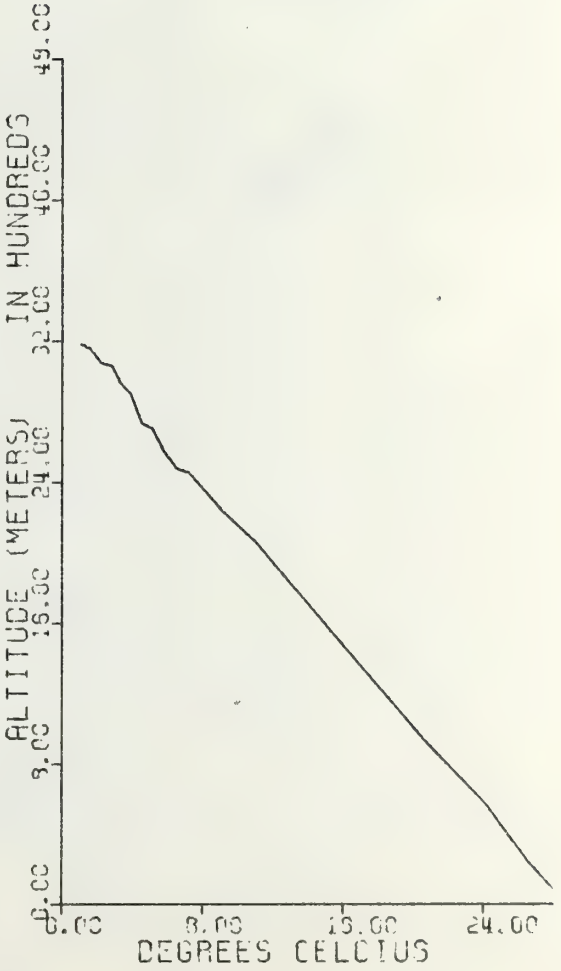
WIND DIRECTION



WIND SPEED



TEMPERATURE

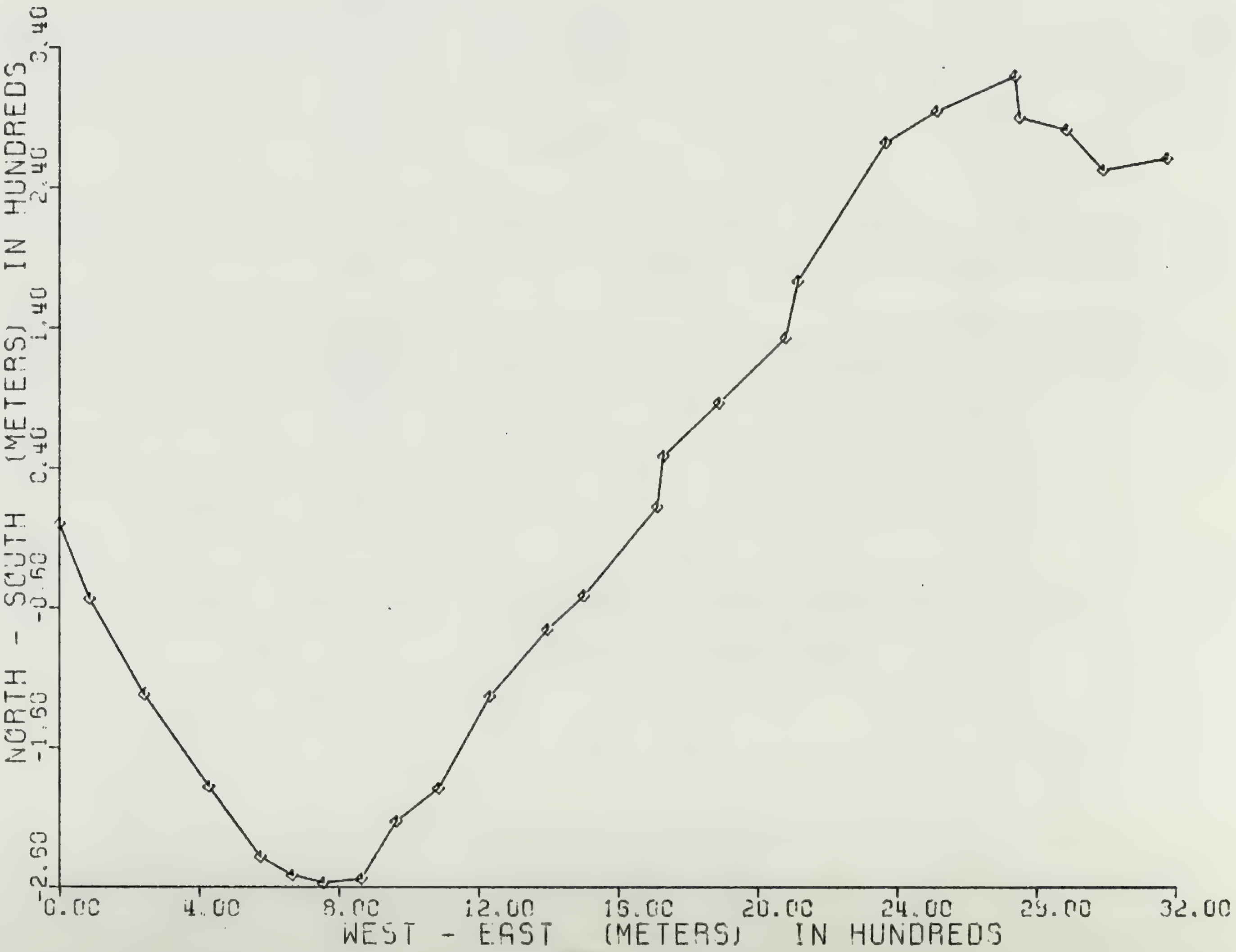


C-B PIBAL SOUNDING

TIME 1315 DATE 7/24/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-25-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                 THEODOLITE #1             THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0       0.0            42.5       -0.1        0.0
   0.5         290.1      18.5            36.7        2.9       19.2
   1.0         292.1      16.3            33.1        2.7       21.2
   1.5         297.0      18.5            30.0        3.1       22.0
   2.0         308.4      22.4            27.4        4.6       21.8
   2.5         314.0      23.6            21.2        5.7       21.6
   3.0         325.1      23.4            19.8       11.6       21.3
   3.5         337.6      22.8            19.4       12.2       21.1
   4.0         348.4      22.3            20.8       12.8       20.9
   4.5         356.5      23.1            22.5       13.8       20.8
   5.0           1.8      24.1            24.2       14.5       20.7
   5.5           7.0      25.3            25.9       15.6       20.6
   6.0          13.2      27.0            28.7       16.5       20.5
   6.5          21.2      28.3            32.0       17.2       20.3
   7.0          29.0      28.2            35.5       17.7       19.9
   7.5          36.4      27.7            39.4       18.1       19.5
   8.0          44.8      26.7            43.6       18.2       19.1
   8.5          50.7      25.8            47.9       18.2       18.7
   9.0          56.0      25.2            51.2       18.3       18.3
   9.5          60.6      24.6            54.5       18.2       17.9
  10.0          64.5      23.8            57.3       18.2       17.5
  10.5          67.6      23.6            60.1       18.3       17.1
  11.0          70.5      23.0            62.3       18.4       16.7
  11.5          71.8      22.8            64.0       18.5       16.3
  12.0          74.0      22.9            65.9       18.7       15.9


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      68.8       4.5
     2       9.0       4.7
     3      84.5       5.0
     4     115.3       5.4
     5     273.4       6.2
     6     187.2       7.4
     7     210.6       8.6
     8     270.5       9.9
     9     305.4      11.1
    10     311.0      11.8
    11     335.4      12.8
    12     320.6      13.5
    13     230.0      14.9
    14     180.1      16.8
    15     149.8      19.1
    16      97.8      21.5
    17      43.6      23.5
    18     178.1      24.1
    19     199.0      24.6
    20     294.1      25.3
    21     230.2      26.9
    22     340.8      27.7
    23     282.6      30.2
    24     259.8      30.9


          HEIGHT  DIRFCTION  SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

            185.    113.      13.3  19.2
            232.    125.       8.3  21.2
            324.    154.       8.8  22.0
            485.    154.      14.7  21.8
            708.    163.      20.0  21.6
           1070.    187.      24.3  21.3
           1298.    203.      27.1  21.1
           1518.    214.      26.2  20.9
           1815.    223.      20.6  20.8
           2035.    230.      18.3  20.7
           2360.    241.      19.5  20.6
           2655.    251.      25.5  20.5
           3075.    247.      36.7  20.3
           3555.    248.      45.5  19.9
           4070.    256.      53.2  19.5
           4549.    265.      53.1  19.1
           4889.    283.      39.5  18.7
           4974.    304.      31.6  18.3
           5007.    303.      30.0  17.9
           5088.    290.      33.1  17.5
           5415.    291.      30.8  17.1
           5505.    278.      34.6  16.7
           6016.    278.      33.1  16.3

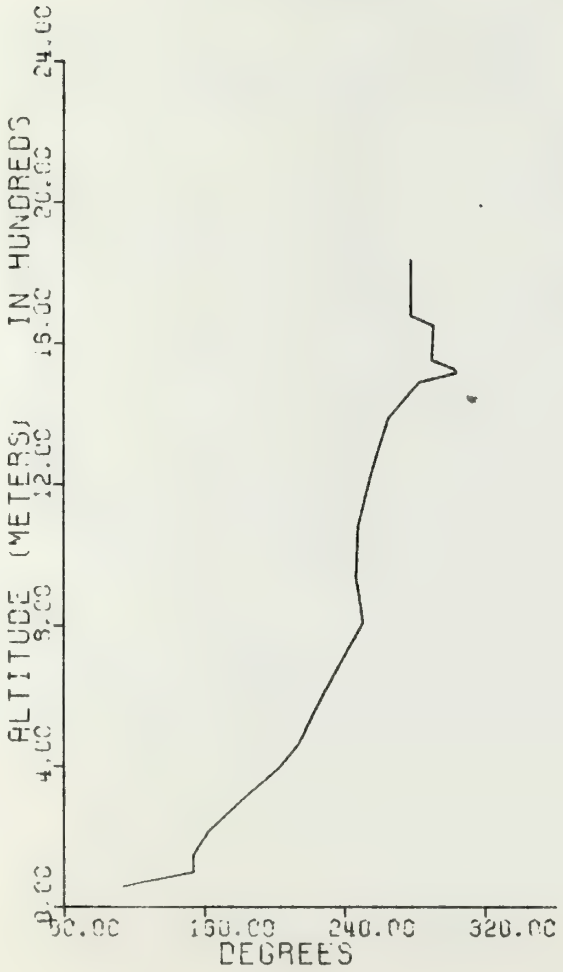

          HEIGHT  DIRECTION  SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

             56.    113.       4.1  19.2
             71.    125.       2.5  21.2
             99.    154.       2.7  22.0
            148.    154.       4.5  21.8
            216.    163.       6.1  21.6
            326.    187.       7.4  21.3
            396.    203.       8.3  21.1
            463.    214.       8.0  20.9
            553.    223.       6.3  20.8
            620.    230.       5.6  20.7
            719.    241.       5.9  20.6
            809.    251.       7.8  20.5
            937.    247.      11.2  20.3
           1083.    248.      13.9  19.9
           1240.    256.      16.2  19.5
           1387.    265.      16.2  19.1
           1490.    283.      12.0  18.7
           1516.    304.       9.6  18.3
           1526.    303.       9.1  17.9
           1551.    290.      10.1  17.5
           1650.    291.       9.4  17.1
           1678.    278.      10.5  16.7
           1834.    278.      10.1  16.3
```

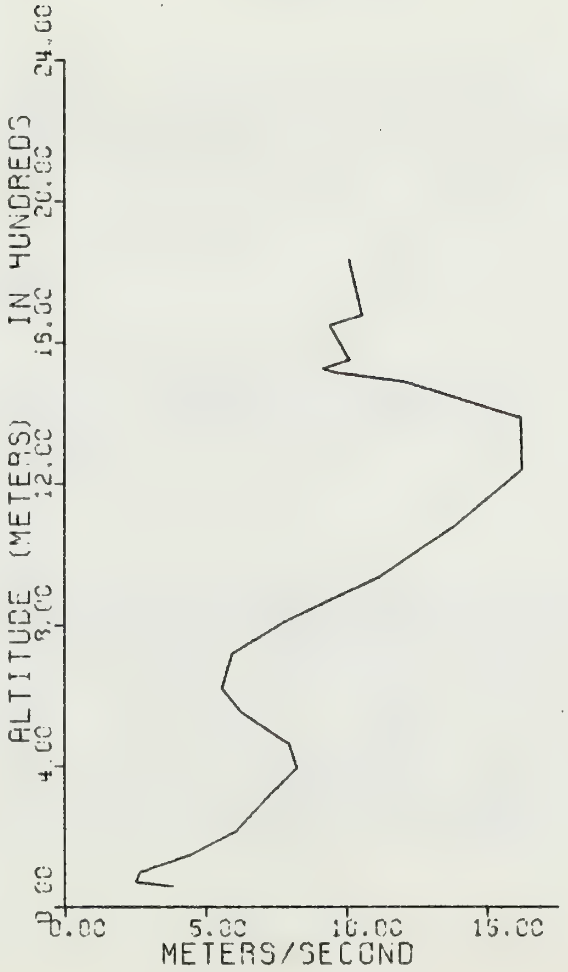
C-B PIBAL SOUNDING

TIME 650   DATE 7/25/78

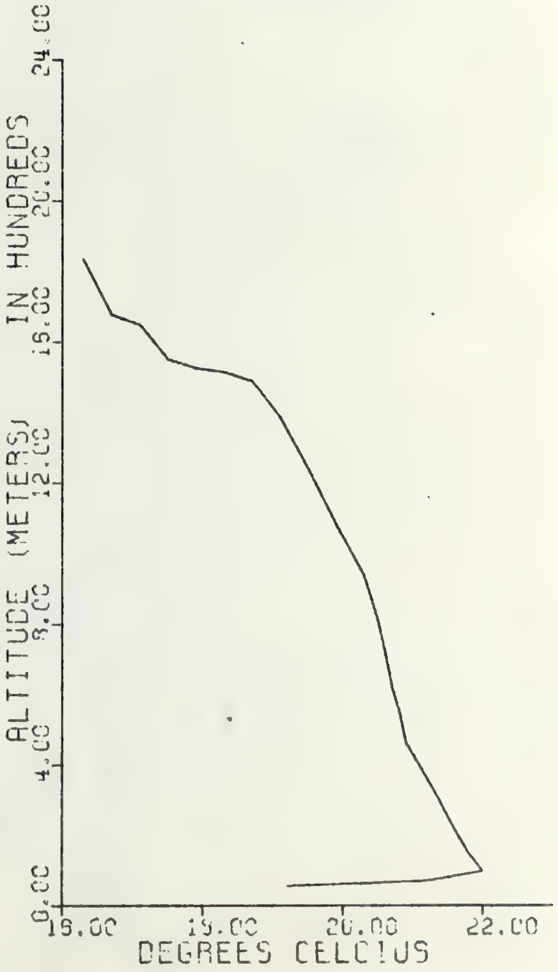
WIND DIRECTION



WIND SPEED



TEMPERATURE

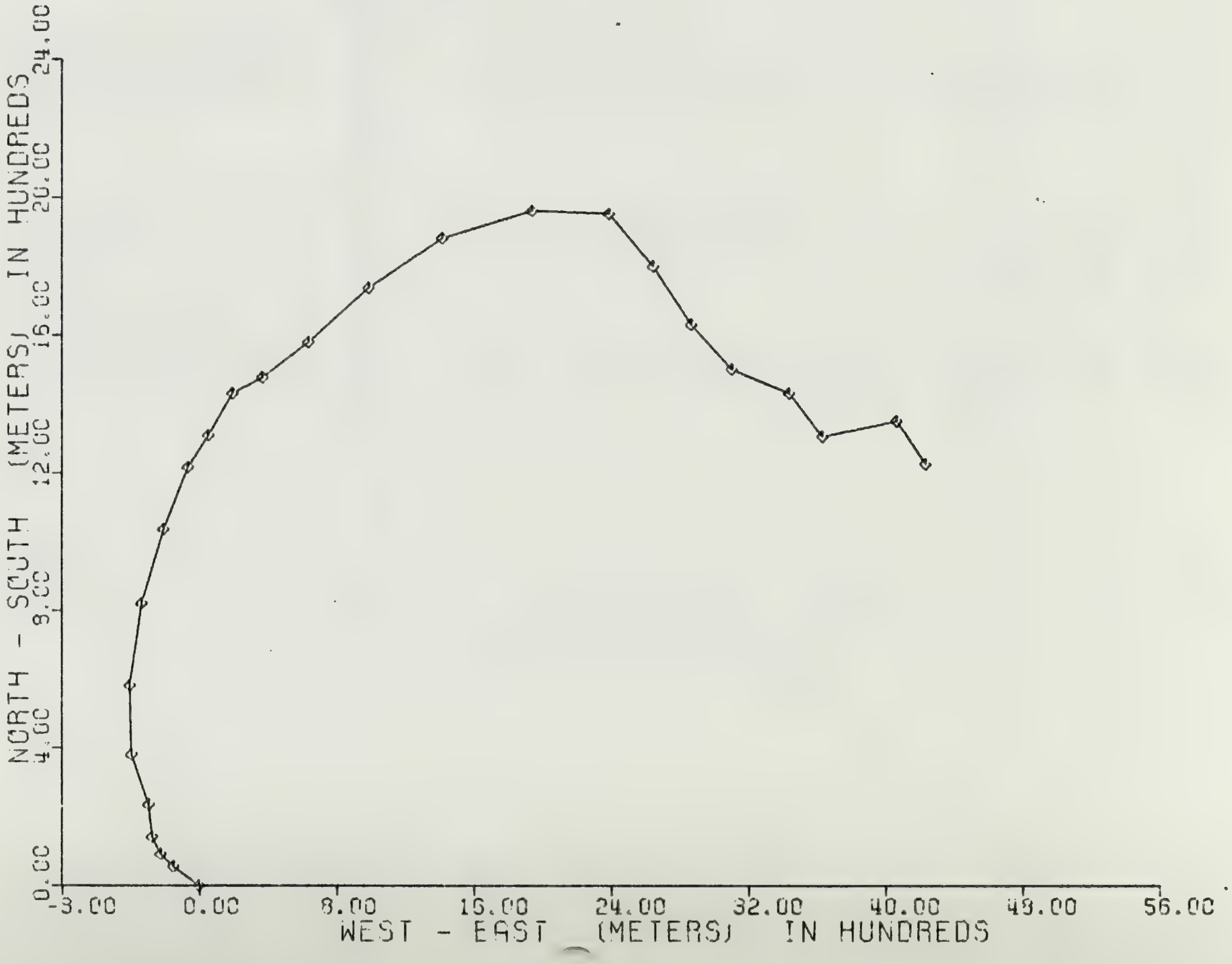


C-B PIBAL SOUNDING

TIME 650   DATE 7/25/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-25-78                                  ** SUSPECT DATA **

BALLOON RELEASED 1315 MST


BASE LINE ANGLE           222.5
BASE LINE LENGTH (FT)    4804.2
TIME INTERVAL (SEC)        30.0
BASE LINE HEIGHT (FT)       8.0


                THEODOLITE #1              THEODOLITE #2

  TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0            0.0        0.0           42.5       -0.1         0.0
  0.5           86.2       42.7           43.4        2.5        34.2
  1.0           83.8       35.1           45.4        3.9        32.2
  1.5           89.4       37.1           48.7        5.9        30.3
  2.0           87.1       40.4           50.5        9.2        29.6
  2.5           84.4       43.2           51.9       12.2        29.0
  3.0           87.2       40.9           55.5       13.9        28.4
  3.5           93.1       37.4           59.8       14.6        27.8
  4.0           98.1       31.6           64.5       14.2        27.3
  4.5           99.6       30.8           66.8       14.8        26.9
  5.0           99.5       28.6           68.9       14.9        26.4
  5.5           99.0       27.5           70.5       15.4        26.0
  6.0           98.6       27.8           72.1       16.2        25.6
  6.5           98.8       28.8           73.9       17.3        25.1
  7.0          101.1       30.0           75.6       18.8        24.7
  7.5          102.2       30.9           77.8       20.3        24.3
  8.0          103.5       31.0           78.0       20.7        23.8
  8.5          105.2       31.5           80.8       21.4        23.4
  9.0          107.1       31.9           82.8       22.2        22.9
  9.5          108.3       30.2           84.7       24.3        22.5
 10.0          109.3       29.4           84.8       24.9        22.1
 10.5          110.1       28.6           85.7       25.5        21.6
 11.0          110.5       28.1           86.6       27.1        21.2
 11.5          111.0       27.6           86.9       27.3        20.8
 12.0          111.9       27.1           87.1       28.0        20.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME      RHO       ERROR

   1      72.0        4.6
   2      55.9        5.0
   3      26.2        5.5
   4      19.1        6.2
   5      41.6        7.0
   6     112.5        7.9
   7     153.4        8.6
   8     142.5        9.5
   9     161.0       10.2
  10     144.1       11.1
  11     117.6       12.1
  12     166.2       13.1
  13     247.9       14.1
  14     218.0       14.5
  15     241.7       15.7
```
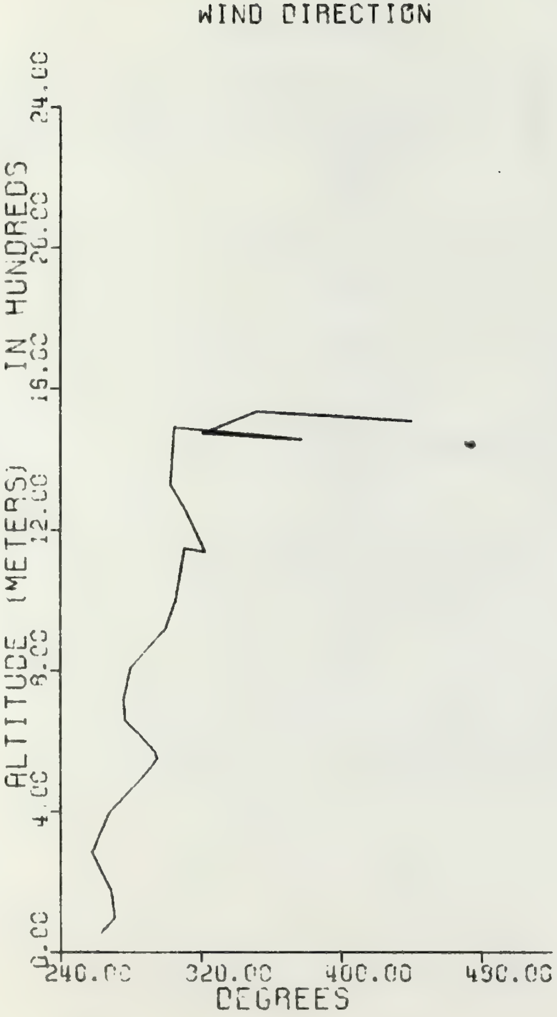
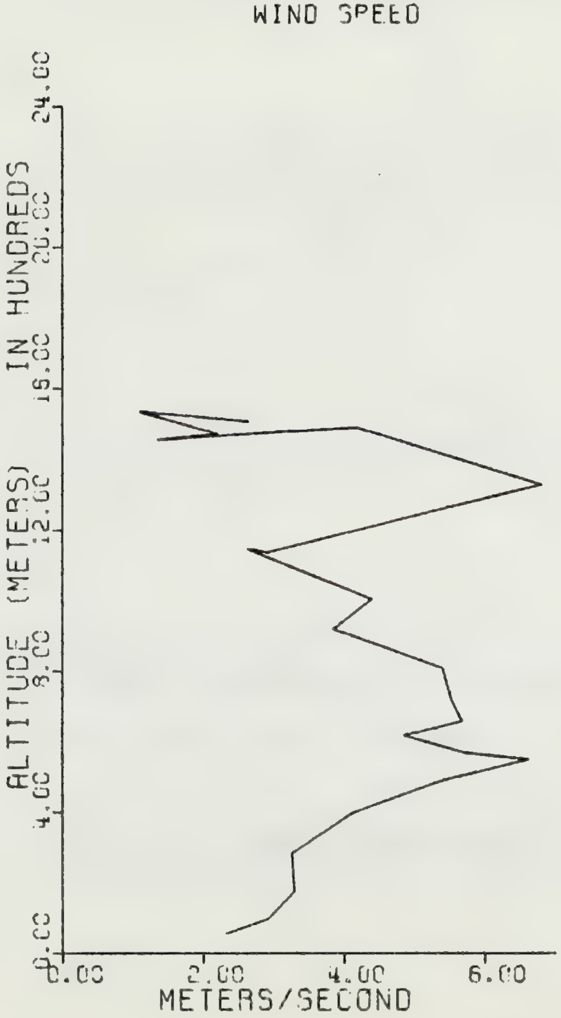
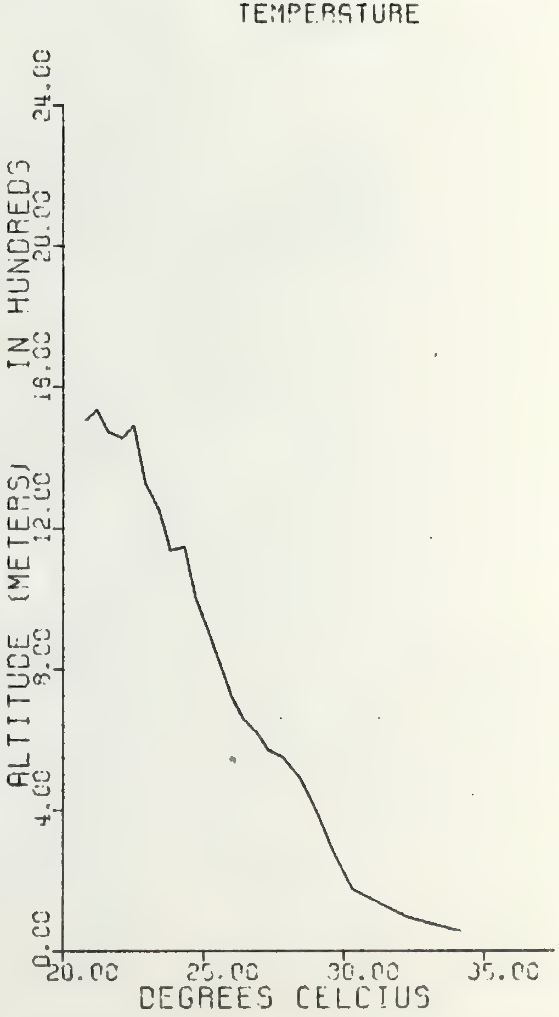

```
16      161.0       15.4
17      289.5       16.5
18      313.2       17.1
19      220.1       18.9
20      483.1       18.5
21      698.3       18.8
22     1081.8       19.2
23     1196.1       18.9
24     1404.1       18.2

       HEIGHT  DIRECTION   SPEED  TEMP
        FEET    DEGREES   FT/SEC DEG C

         182.    263.        7.6  34.2
         324.    271.        9.6  32.2
         577.    269.       10.8  30.3
         931.    258.       10.7  29.6
        1307.    268.       13.5  29.0
        1619.    286.       17.8  28.4
        1808.    295.       21.7  27.8
        1872.    294.       18.7  27.3
        2032.    285.       15.9  26.9
        2165.    277.       18.6  26.4
        2361.    276.       18.1  26.0
        2653.    280.       17.7  25.6
        3020.    300.       12.6  25.1
        3297.    306.       14.4  24.7
        3762.    311.        8.6  24.3
        3729.    323.        9.5  23.8
        4103.    312.       17.0  23.4
        4358.    303.       22.3  22.9
        4889.    305.       13.7  22.5
        4771.     18.        4.4  22.1
        4828.    321.        7.2  21.6
        5036.    352.        3.6  21.2
        4945.     80.        8.6  20.8

       HEIGHT  DIRECTION   SPEED  TEMP
       METERS   DEGREES    M/SEC  DEG C

          56.    263.        2.3  34.2
          99.    271.        2.9  32.2
         176.    269.        3.3  30.3
         284.    258.        3.3  29.6
         398.    268.        4.1  29.0
         494.    286.        5.4  28.4
         551.    295.        6.6  27.8
         570.    294.        5.7  27.3
         619.    285.        4.8  26.9
         660.    277.        5.7  26.4
         719.    276.        5.5  26.0
         808.    280.        5.4  25.6
         920.    300.        3.8  25.1
        1005.    306.        4.4  24.7
        1147.    311.        2.6  24.3
        1136.    323.        2.9  23.8
        1251.    312.        5.2  23.4
        1328.    303.        6.8  22.9
        1490.    305.        4.2  22.5
        1454.     18.        1.3  22.1
        1472.    321.        2.2  21.6
        1535.    352.        1.1  21.2
        1507.     80.        2.6  20.8
```

C-B PIBAL SOUNDING

TIME 1315 DATE 7/25/78


WIND DIRECTION


WIND SPEED

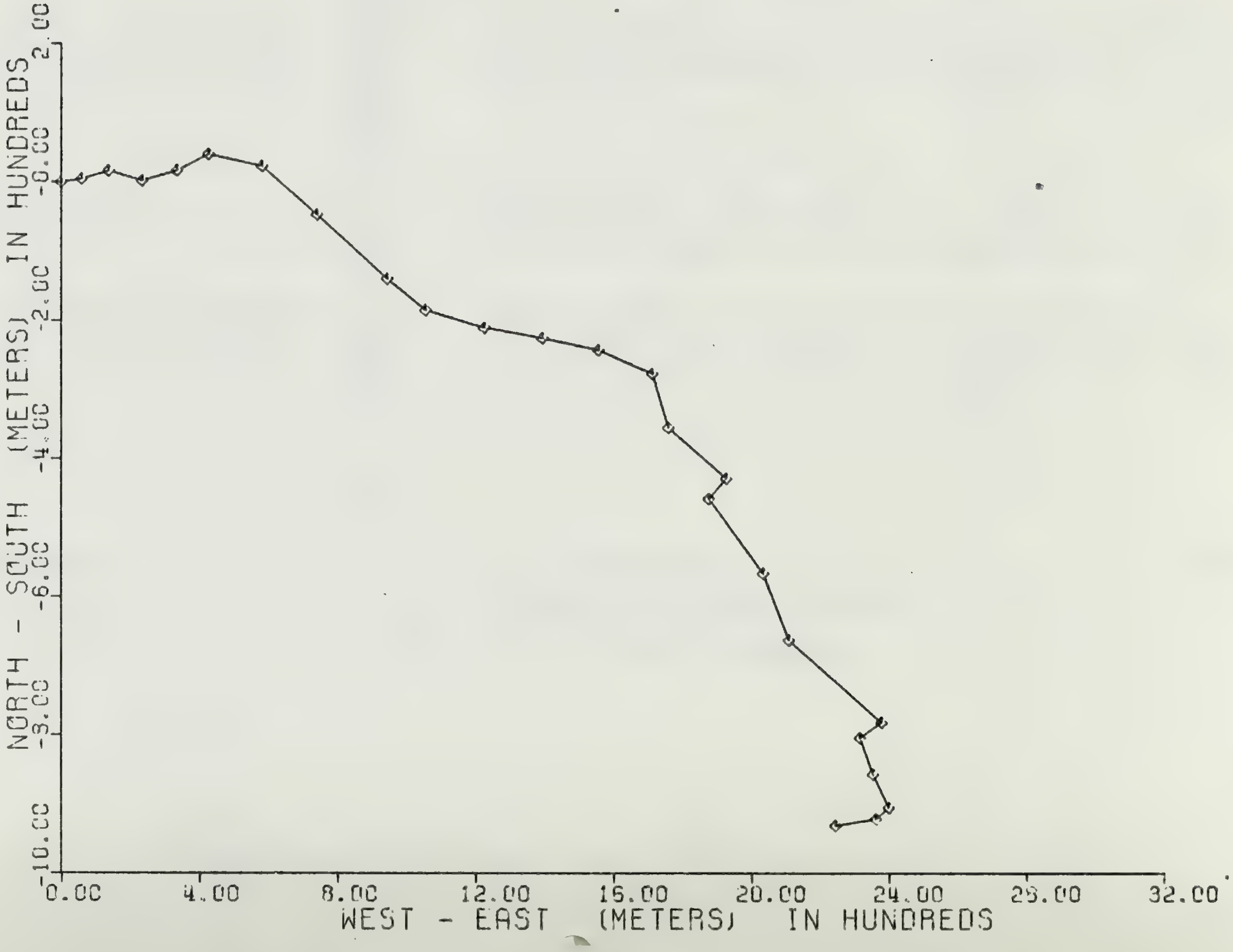

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1315   DATE 7/25/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL

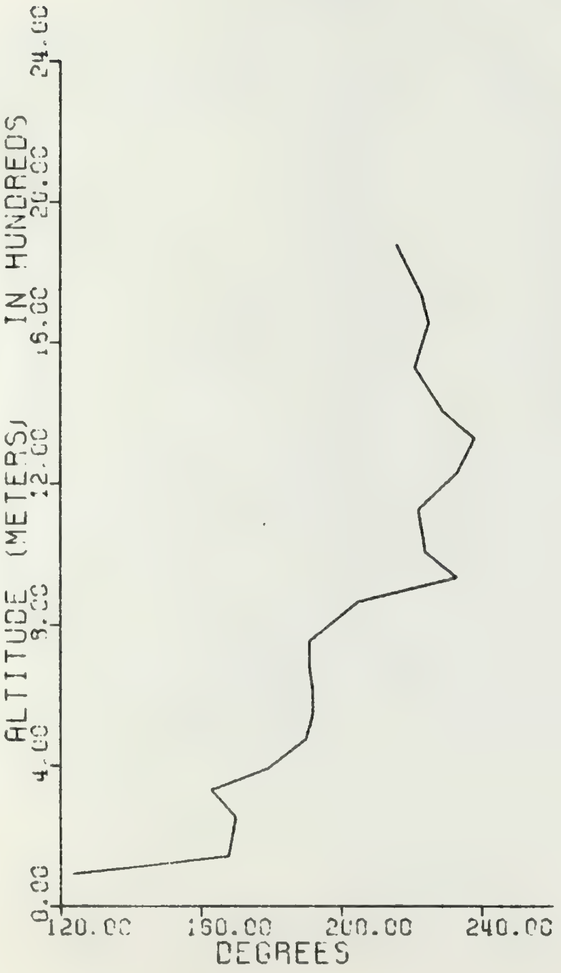


```
C-B PIBAL SOUNDING

SOUNDING DATE  7-27-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0       0.0           42.5       -0.1         0.0
   0.5        297.2      33.2           36.6        3.1        19.3
   1.0        302.2      33.2           33.9        5.6        19.0
   1.5        328.2      37.7           30.8        8.9        19.6
   2.0        330.5      33.7           26.1       10.9        19.3
   2.5        335.7      28.7           22.2       12.1        18.2
   3.0        343.2      27.6           21.0       13.3        20.4
   3.5        348.0      26.9           20.3       14.1        20.8
   4.0        351.1      26.3           20.0       14.8        20.5
   4.5        353.2      26.3           19.5       15.6        21.0
   5.0        355.0      26.4           19.2       16.3        20.7
   5.5        356.8      26.7           18.7       17.4        20.4
   6.0        359.8      27.3           20.0       18.2        20.4
   6.5          3.1      28.0           21.5       18.9        20.1
   7.0          6.8      28.3           22.7       19.6        19.8
   7.5          9.8      29.0           24.0       20.3        19.1
   8.0         13.0      29.6           25.6       20.9        18.4
   8.5         15.5      29.9           26.9       21.3        17.7
   9.0         17.8      30.3           27.7       21.7        17.0
   9.5         19.3      30.6           28.3       22.3        16.3
  10.0         20.3      31.0           29.1       23.0        15.7
  10.5         21.4      31.3           29.4       23.5        15.2
  11.0         22.1      31.6           29.6       23.9        14.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       54.0        4.6
     2        1.1        4.9
     3       19.0        5.8
     4       18.0        6.6
     5       47.4        7.8
     6       85.3        9.0
     7      105.3       10.1
     8      154.5       10.9
     9      178.1       11.9
    10      197.4       12.7
    11      237.0       14.0
    12      298.7       14.6
    13      334.0       15.3
    14      354.2       16.6
    15      358.3       17.6
    16      367.0       18.5
    17      380.3       19.3
   18      311.5       20.6
   19      319.9       21.9
   20      417.7       22.5
   21      390.1       23.9
   22      367.7       24.9


          HEIGHT  DIRECTION  SPEED   TEMP
           FEET    DEGREES   FT/SEC  DEG C

           303.     123.      12.0   19.3
           471.     168.      12.0   19.0
           835.     170.      17.6   19.6
          1085.     163.      20.9   19.3
          1287.     179.      23.0   18.2
          1560.     190.      21.8   20.4
          1801.     192.      18.5   20.8
          2000.     192.      16.5   20.5
          2242.     191.      15.9   21.0
          2476.     191.      18.5   20.7
          2843.     205.      16.4   20.4
          3065.     233.      13.5   20.4
          3301.     224.      19.7   20.1
          3697.     222.      22.0   19.8
          4038.     233.      18.7   19.1
          4357.     238.      17.5   18.4
          4610.     229.      19.5   17.7
          5017.     221.      22.4   17.0
          5434.     225.      15.4   16.3
          5692.     223.      16.1   15.7
          6151.     216.      19.3   15.2


          HEIGHT  DIRECTION  SPEED   TEMP
          METERS   DEGREES   M/SEC   DEG C

            92.     123.       3.7   19.3
           144.     168.       3.7   19.0
           254.     170.       5.4   19.6
           331.     163.       6.4   19.3
           392.     179.       7.0   18.2
           475.     190.       6.6   20.4
           549.     192.       5.6   20.8
           610.     192.       5.0   20.5
           683.     191.       4.8   21.0
           755.     191.       5.6   20.7
           867.     205.       5.0   20.4
           934.     233.       4.1   20.4
          1006.     224.       6.0   20.1
          1127.     222.       6.7   19.8
          1231.     233.       5.7   19.1
          1328.     238.       5.3   18.4
          1405.     229.       5.9   17.7
          1529.     221.       6.8   17.0
          1656.     225.       4.7   16.3
          1735.     223.       4.9   15.7
          1875.     216.       5.9   15.2
```

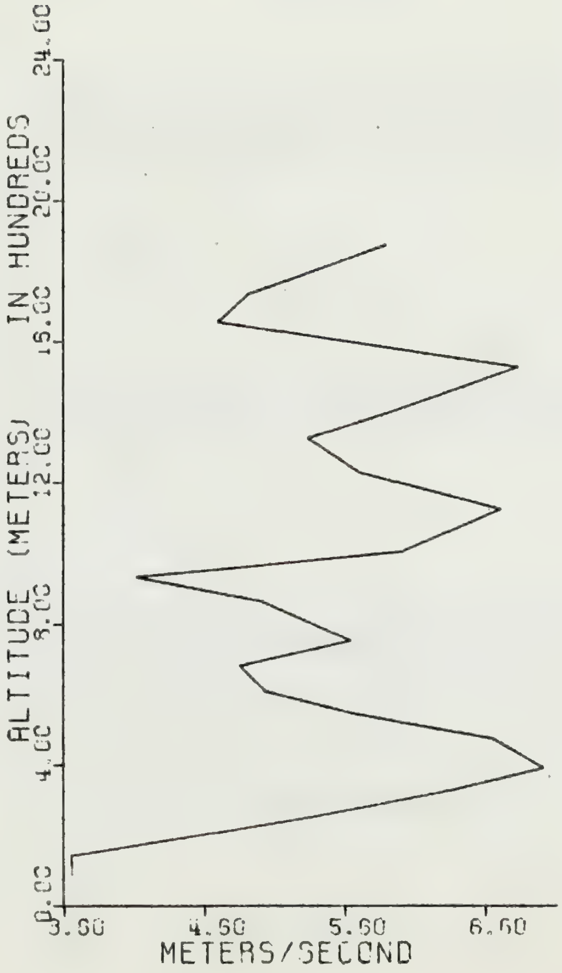
C-B PIBAL SOUNDING

TIME 650   DATE 7/27/78

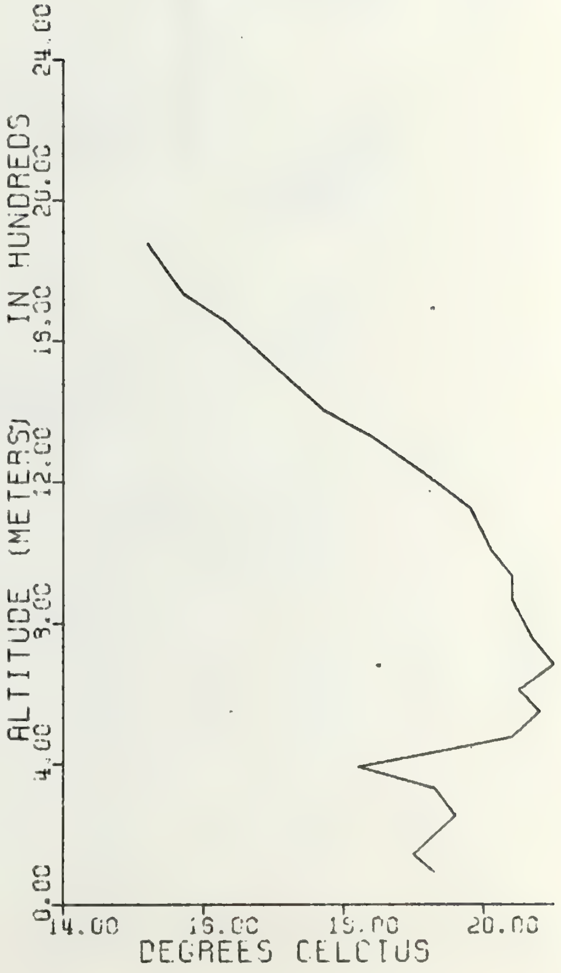
WIND DIRECTION



WIND SPEED



TEMPERSTURE

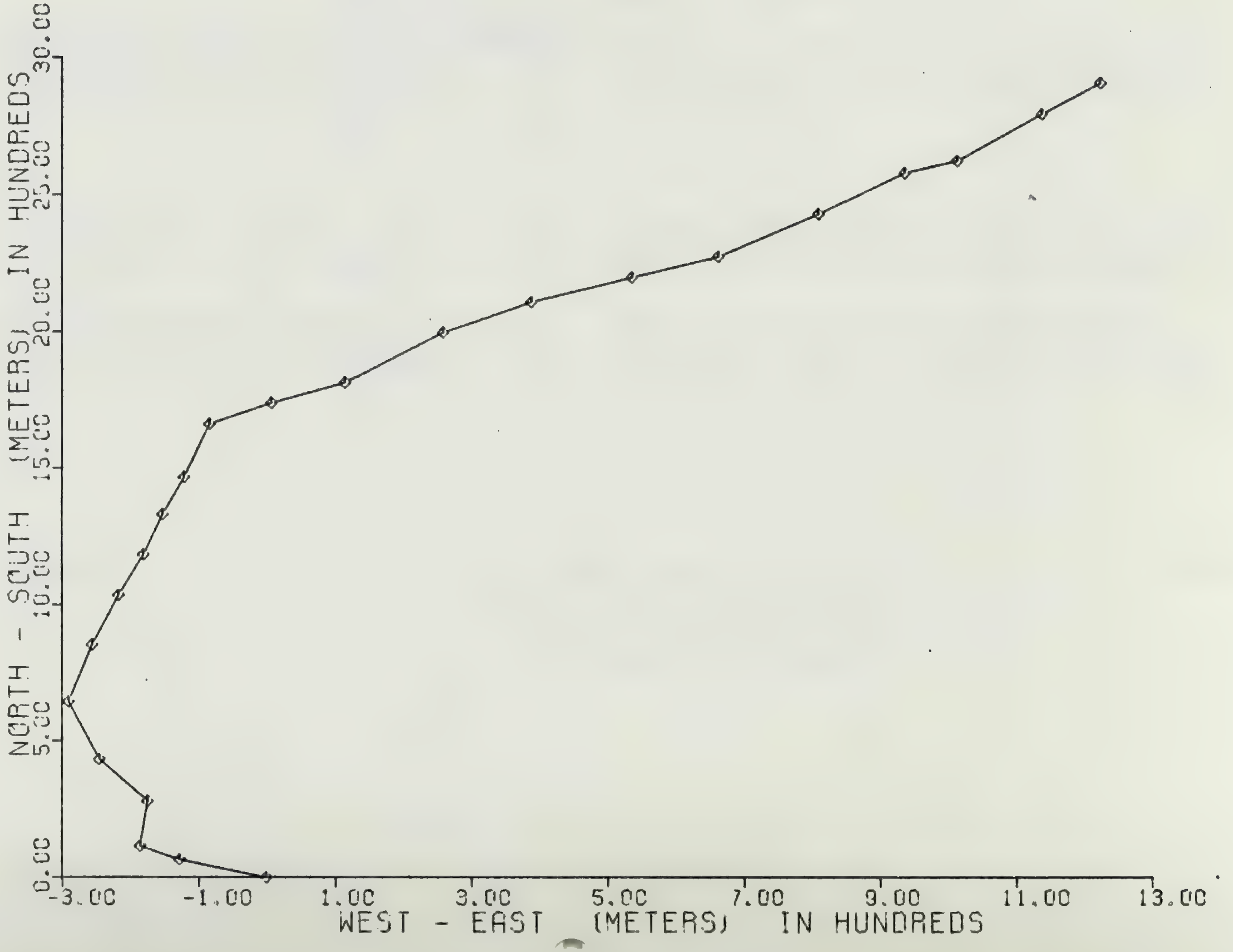


C-B PIBAL SOUNDING

TIME 650 DATE 7/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-27-78                                    ** SUSPECT DATA **

BALLOON RELEASED 1345 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1
   0.5          127.2       44.3            46.5        4.5
   1.0          116.1       54.1            50.3        9.1
   1.5          121.0       54.7            48.6        9.7
   2.0          129.1       52.8            49.0       10.3
   2.5          137.1       45.1            52.5        9.4
   3.0          137.3       33.2            55.2        8.2
   3.5          136.7       28.9            56.8        8.7
   4.0          138.3       27.2            58.9        8.4
   4.5          141.1       21.2            61.3        6.8
   5.0          141.2       19.4            63.2        6.0
   5.5          141.6       17.1            64.9        5.8
   6.0          141.0       16.9            66.5        6.1
   6.5          146.2       17.7            68.8        6.9
   7.0          150.1       17.4            71.8        7.7
   7.5          153.0       16.4            75.1        7.9
   8.0          156.3       16.3            77.6        8.5
   8.5          158.3       16.0            80.0        8.1
   9.0          160.0       15.5            83.4        9.6
   9.5          160.8       15.8            85.7       10.7
  10.0          161.7       16.5            89.3       11.3
  10.5          161.7       16.3            92.7       11.8
  11.0          161.5       16.9            97.4       12.6
  11.5          160.3       17.0           101.5       21.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       41.5       4.7
     2       96.6       5.4
     3       54.7       5.3
     4       99.9       5.2
     5       25.8       5.3
     6        5.6       5.4
     7       76.4       5.5
     8       15.0       5.6
     9       24.8       5.7
    10       87.8       5.8
    11       72.2       6.0
    12       77.6       6.2
    13      104.0       6.2
    14      106.7       6.3
    15      126.7       6.4
    16      139.4       6.5
  17      210.5        6.6
  18      141.7        6.8
  19      122.3        7.0
  20      191.7        7.2
  21      200.1        7.6
  22      262.3        8.1
  23      456.1        9.0


        HEIGHT  DIRECTION   SPEED  TEMP
         FEET    DEGREES   FT/SEC DEG C

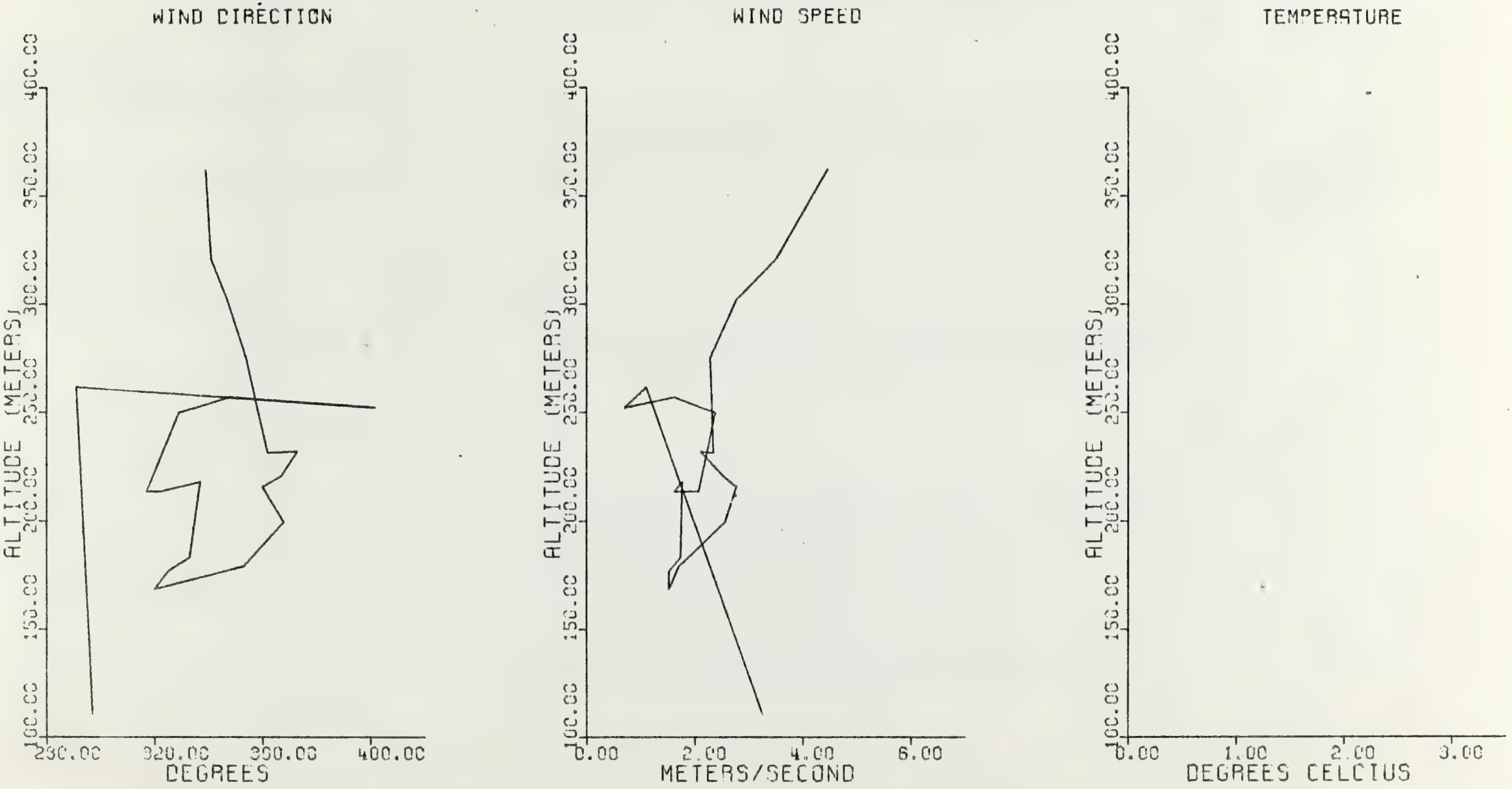
          363.     297.       10.7
          858.     291.        3.6
          828.      42.        2.3
          843.     348.        5.3
          819.     329.        7.8
          701.     317.        6.8
          700.     322.        5.3
          716.     337.        5.8
          601.     333.        5.7
          579.     325.        5.0
          553.     320.        5.0
          587.     353.        5.6
          655.       8.        8.4
          708.       0.        9.1
          724.       7.        8.3
          761.      13.        6.9
          759.       2.        7.7
          829.     358.        7.6
          903.     354.        7.5
          991.     347.        9.1
         1053.     341.       11.5
         1187.     339.       14.6


        HEIGHT  DIRECTION   SPEED   TEMP
        METERS   DEGREES    M/SEC   DEG C

          111.     297.        3.3
          262.     291.        1.1
          252.      42.        0.7
          257.     348.        1.6
          250.     329.        2.4
          214.     317.        2.1
          213.     322.        1.6
          218.     337.        1.8
          183.     333.        1.7
          176.     325.        1.5
          168.     320.        1.5
          179.     353.        1.7
          200.       8.        2.6
          216.       0.        2.8
          221.       7.        2.5
          232.      13.        2.1
          231.       2.        2.3
          253.     358.        2.3
          275.     354.        2.3
          302.     347.        2.8
          321.     341.        3.5
          362.     339.        4.5
```

C-B PIBAL SOUNDING

TIME 1345   DATE 7/27/78

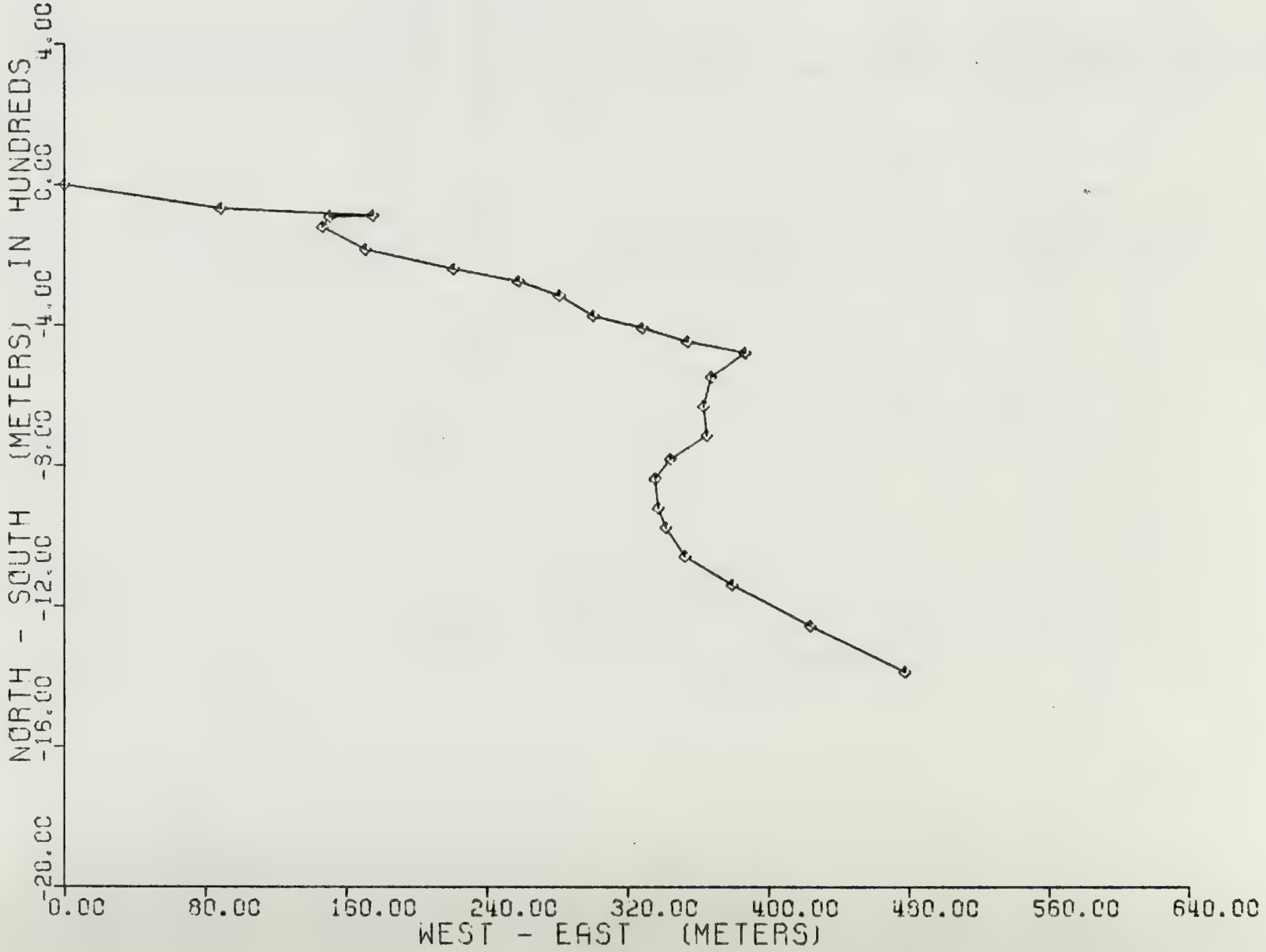


C-B PIBAL SOUNDING

TIME 1345 DATE 7/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-28-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1        0.0
   0.5         285.2       50.0           39.2        2.7       21.7
   1.0         325.1       67.5           39.1        5.9       22.3
   1.5          23.2       65.5           40.4        8.8       22.5
   2.0          27.3       61.8           39.8       10.3       22.3
   2.5          24.8       50.7           38.3       11.8       20.5
   3.0          23.2       41.7           37.0       12.9       18.7
   3.5          24.4       36.5           36.4       13.7       17.0
   4.0          26.5       31.6           36.1       14.4       15.6
   4.5          29.1       29.1           36.2       14.6       14.3
   5.0          30.1       27.8           37.0       14.9       13.0
   5.5          33.3       25.1           37.8       15.1       11.6
   6.0          35.3       24.1           38.8       15.3       10.3
   6.5          36.8       23.3           39.5       15.7        9.0
   7.0          37.8       22.6           39.9       15.9        7.6
   7.5          38.5       21.8           40.2       16.0        6.3
   8.0          39.4       21.6           40.6       16.2        5.0
   8.5          39.7       20.7           40.8       16.2        3.6
   9.0          40.3       20.7           41.3       16.4        2.9
   9.5          41.4       20.4           42.2       16.5        2.8
  10.0          42.2       20.2           42.7       16.7        2.8
  10.5          42.9       20.4           43.3       17.0        2.7
  11.0          43.5       20.5           43.7       17.3        2.6
  11.5          44.0       20.7           44.2       17.6        2.5
  12.0          44.7       20.8           44.7       17.8        2.5


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       79.7       4.4
     2       76.0       4.8
     3       66.8       5.3
     4      112.5       5.7
     5      117.4       6.6
     6       62.8       7.7
     7       22.5       8.9
     8       29.7      10.7
     9        7.5      12.3
    10      112.3      13.1
    11      109.0      16.1
    12      143.1      17.9
    13      166.3      20.5
    14      158.5      23.1
    15      163.6      26.2
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     16      116.8       28.5
     17      161.5       33.1
     18      191.7       34.8
     19      234.5       38.0
     20      201.2       42.9
     21      221.5       44.8
     22      184.4       48.5
     23      230.2       50.6
     24      184.4       53.1


          HEIGHT  DIRECTION   SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

            274.     145.       3.8  21.7
            536.     232.       7.7  22.3
            815.     230.       7.8  22.5
            987.     204.      10.8  22.3
           1237.     201.      19.2  20.5
           1494.     204.      22.2  18.7
           1741.     210.      28.1  17.0
           2078.     215.      31.2  15.6
           2342.     220.      22.1  14.3
           2483.     222.      35.5  13.0
           2968.     224.      44.3  11.6
           3276.     226.      40.5  10.3
           3764.     224.      47.4   9.0
           4222.     223.      52.4   7.6
           4745.     224.      49.8   6.3
           5184.     223.      63.6   5.0
           5920.     224.      57.2   3.6
           6251.     231.      45.2   2.9
           6821.     229.      74.5   2.8
           7711.     230.      61.3   2.8
           8167.     232.      50.5   2.7
           8946.     231.      51.8   2.6
           9456.     236.      41.5   2.5


          HEIGHT  DIRECTION   SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

             84.     145.       1.2  21.7
            163.     232.       2.3  22.3
            248.     230.       2.4  22.5
            301.     204.       3.3  22.3
            377.     201.       5.9  20.5
            455.     204.       6.8  18.7
            531.     210.       8.6  17.0
            633.     215.       9.5  15.6
            714.     220.       6.7  14.3
            757.     222.      10.8  13.0
            905.     224.      13.5  11.6
            998.     226.      12.3  10.3
           1147.     224.      14.4   9.0
           1287.     223.      16.0   7.6
           1446.     224.      15.2   6.3
           1580.     223.      19.4   5.0
           1804.     224.      17.4   3.6
           1905.     231.      13.8   2.9
           2079.     229.      22.7   2.8
           2350.     230.      18.7   2.8
           2489.     232.      15.4   2.7
           2727.     231.      15.8   2.6
           2882.     236.      12.6   2.5
```
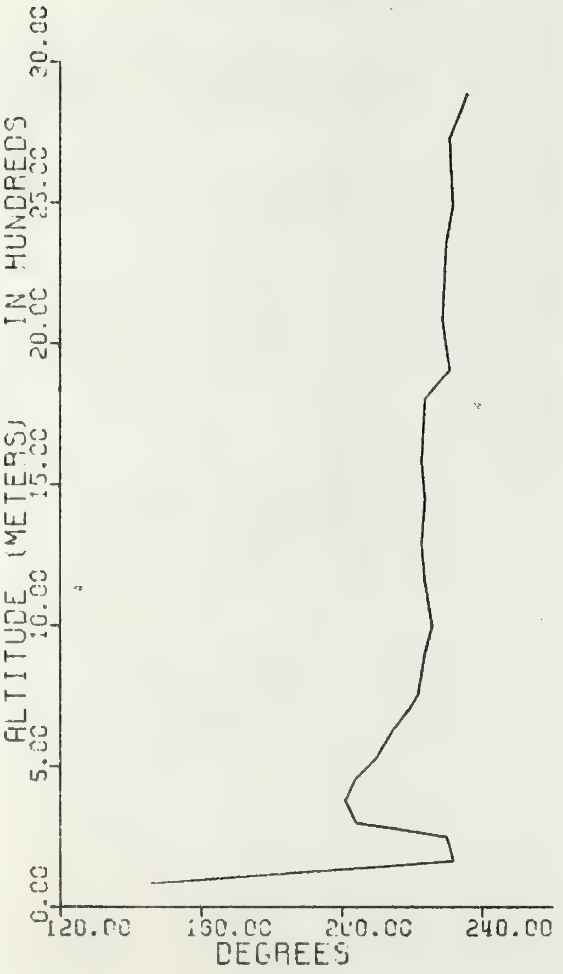
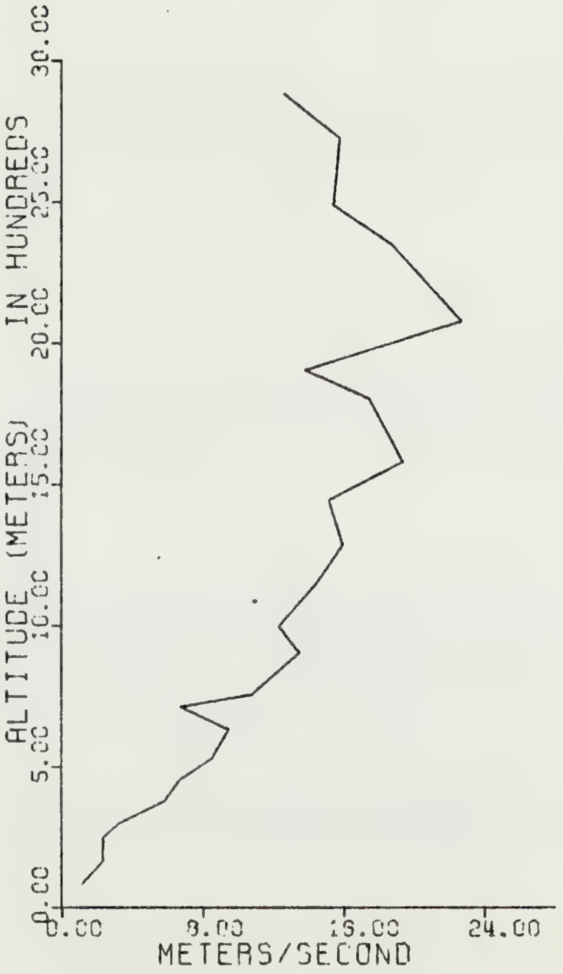

C-B PIBAL SOUNDING

TIME 650   DATE 7/28/78

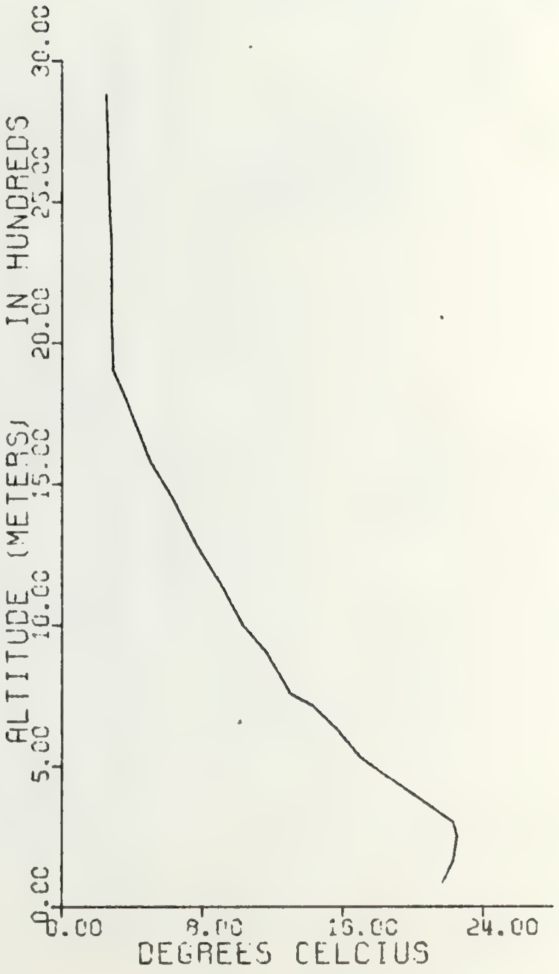
WIND DIRECTION



WIND SPEED



TEMPERATURE

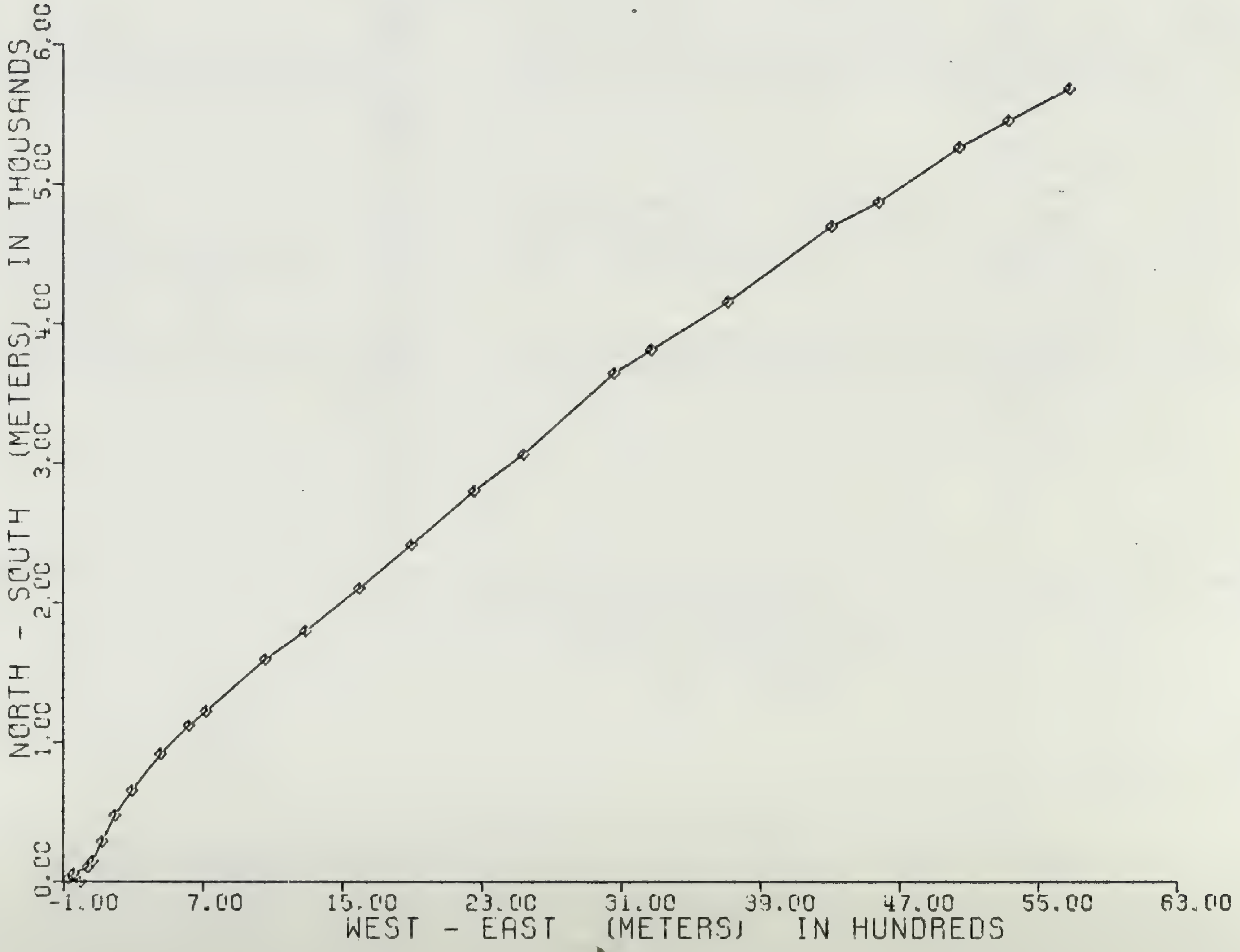


C-B PIBAL SOUNDING

TIME 650   DATE 7/28/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  7-28-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       1804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0          42.5       -0.3          0.0
   0.5         20.9       45.4          39.5        5.5         27.9
   1.0         13.0       38.7          36.2        9.4         28.1
   1.5         10.3       41.1          33.9       13.3         26.4
   2.0          5.8       42.5          30.8       17.4         24.7
   2.5          3.0       43.3          28.5       20.2         23.0
   3.0          2.5       41.4          26.2       21.7         21.4
   3.5          1.2       41.0          24.0       23.8         19.7
   4.0          1.8       40.4          23.3       24.8         18.0
   4.5          2.6       40.8          22.6       26.4         16.4
   5.0          3.5       41.7          22.4       27.8         14.7
   5.5          5.5       42.0          22.6       29.1         13.3
   6.0          8.1       40.7          23.1       29.1         12.1
   6.5          9.8       39.8          23.6       29.1         11.0
   7.0         12.0       39.0          24.2       29.1          9.8
   7.5         13.5       38.1          24.6       29.1          8.7
   8.0         15.1       38.2          25.2       28.9          7.5
   8.5         16.7       36.8          25.8       28.8          6.7
   9.0         18.1       36.5          26.7       28.8          6.1
   9.5         20.2       35.6          27.9       28.5          5.5
  10.0         21.7       34.8          28.6       28.3          4.9
  10.5         23.0       34.6          29.2       27.9          4.3
  11.0         23.7       33.1          29.8       27.5          3.7
  11.5         25.4       32.5          30.8       27.0          3.1
  12.0         27.4       31.3          32.2       26.4          2.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      29.9       2.0
     2      11.0       2.5
     3       6.3       2.9
     4       7.8       3.4
     5      18.8       3.8
     6      27.1       4.3
     7      48.9       4.8
     8      71.3       5.2
     9      85.6       5.7
    10      91.0       6.1
    11     107.7       6.7
    12     123.2       7.3
    13     143.7       7.7
    14     146.4       8.4
    15     165.2       9.0
```

```
16     119.1      9.2
17     165.0     10.1
18     182.3     10.4
19     201.5     11.0
20     212.2     11.8
21     163.7     12.0
22     249.8     12.7
23     226.9     13.2
24     257.6     14.1


      HEIGHT  DIRECTION   SPEED   TEMP
       FEET    DEGREES   FT/SEC  DEG C

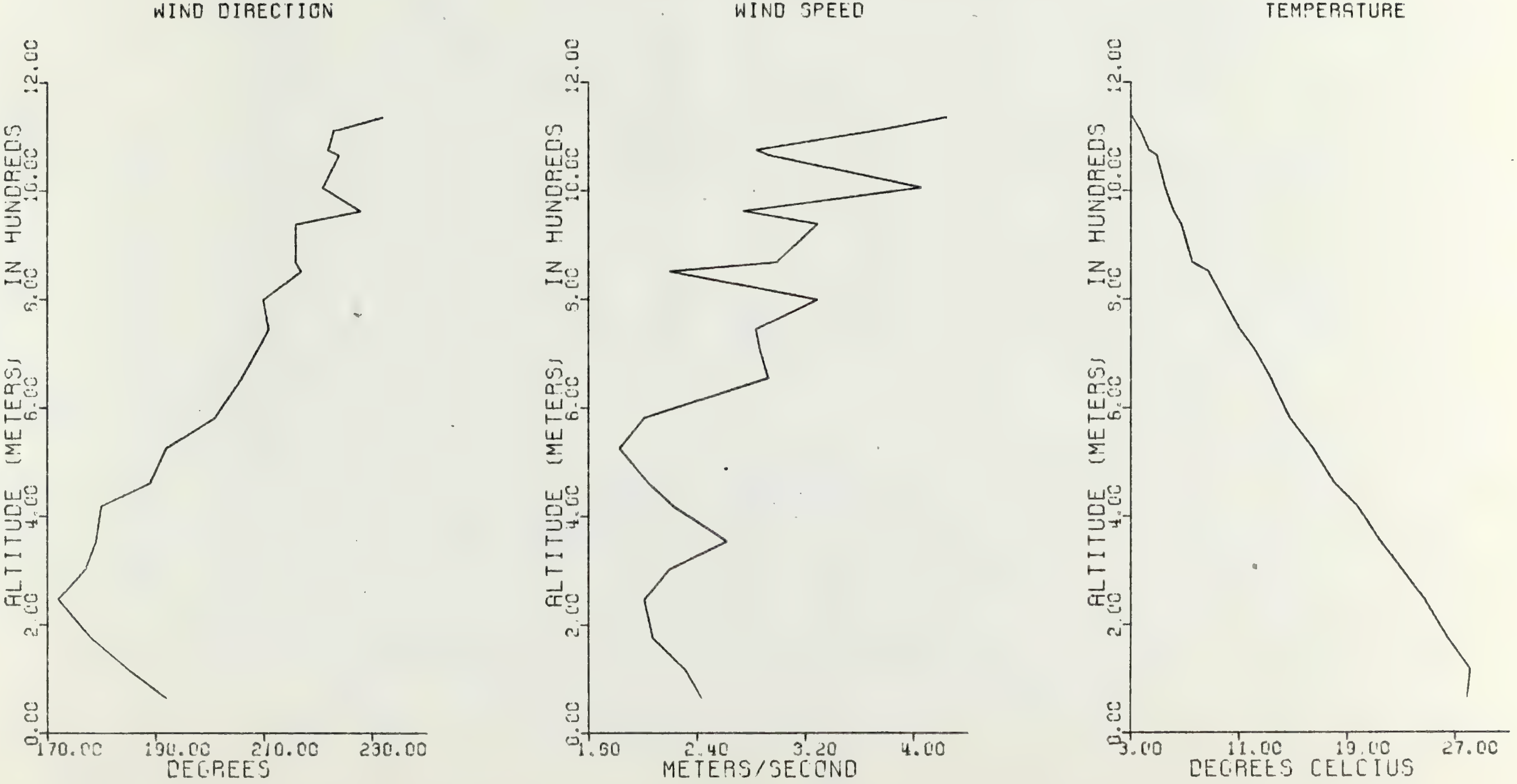
        209.     192.       8.0   27.9
        382.     185.       7.6   28.1
        575.     178.       6.8   26.4
        808.     172.       6.6   24.7
        992.     177.       7.2   23.0
       1162.     179.       8.6   21.4
       1376.     180.       7.3   19.7
       1515.     189.       6.7   18.0
       1727.     192.       6.0   16.4
       1911.     201.       6.6   14.7
       2150.     206.       9.6   13.3
       2324.     209.       9.4   12.1
       2445.     211.       9.3   11.0
       2623.     210.      10.8    9.8
       2795.     217.       7.2    8.7
       2849.     216.       9.8    7.5
       3080.     216.      10.8    6.7
       3158.     228.       9.0    6.1
       3298.     221.      13.3    5.5
       3497.     224.       9.6    4.9
       3527.     222.       9.3    4.3
       3643.     223.      12.2    3.7
       3726.     232.      13.9    3.1


      HEIGHT  DIRECTION   SPEED   TEMP
      METERS   DEGREES    M/SEC   DEG C

         64.     192.       2.4   27.9
        117.     185.       2.3   28.1
        175.     178.       2.1   26.4
        246.     172.       2.0   24.7
        302.     177.       2.2   23.0
        354.     179.       2.6   21.4
        420.     180.       2.2   19.7
        462.     189.       2.0   18.0
        526.     192.       1.8   16.4
        582.     201.       2.0   14.7
        655.     206.       2.9   13.3
        708.     209.       2.9   12.1
        745.     211.       2.8   11.0
        799.     210.       3.3    9.8
        852.     217.       2.2    8.7
        868.     216.       3.0    7.5
        939.     216.       3.3    6.7
        963.     228.       2.7    6.1
       1005.     221.       4.1    5.5
       1066.     224.       2.9    4.9
       1075.     222.       2.8    4.3
       1110.     223.       3.7    3.7
       1136.     232.       4.2    3.1
```

C-B PIBAL SOUNDING

TIME 1330 DATE 7/28/78

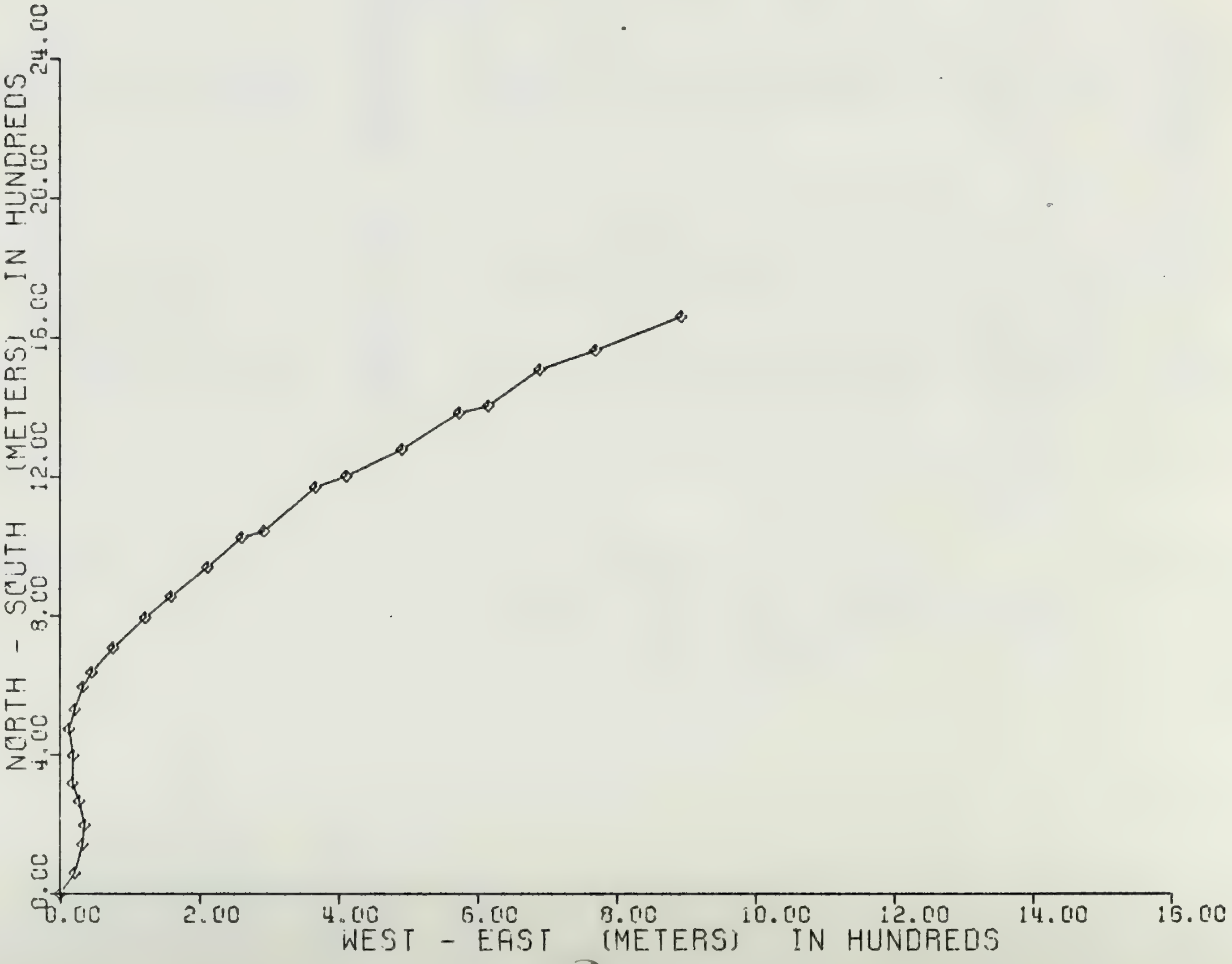


C-B PIBAL SOUNDING

TIME 1330 DATE 7/28/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-b PIBAL SOUNDING

TIME: 0645 DATE: 7/31/78

DOUBLE THEODOLITE DATA NOT RECORDED.
SITE #1 LOST BALLOON.

```
C-B PIBAL SOUNDING

SOUNDING DATE  7-31-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1               THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1         0.0
   0.5          76.8       16.0           46.4        2.3        28.0
   1.0          71.2       12.2           48.7        3.2        27.6
   1.5          67.0       13.9           49.9        4.9        27.2
   2.0          64.1       14.7           50.5        6.2        26.5
   2.5          61.0       15.8           50.1        7.9        25.5
   3.0          59.1       15.8           49.9        9.8        24.5
   3.5          60.0       20.9           51.3       12.2        23.2
   4.0          60.1       21.6           52.9       13.8        21.6
   4.5          57.7       22.7           51.7       15.2        20.0
   5.0          55.4       23.5           50.7       16.3        18.5
   5.5          54.3       23.9           50.1       16.9        17.4
   6.0          53.8       24.1           50.0       17.5        16.4
   6.5          53.2       25.3           49.9       18.2        15.3
   7.0          52.9       26.5           49.8       19.2        14.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       33.7        5.3
     2       47.6        6.6
     3       59.2        8.0
     4       65.5        9.4
     5      138.1       10.9
     6      320.4       13.1
     7      143.9       14.3
     8       72.3       17.7
     9      118.6       19.5
    10       98.0       21.8
    11      109.6       23.0
    12      112.4       24.8
    13        7.9       24.8
    14       11.9       25.4


         HEIGHT  DIRECTION  SPEED   TEMP
          FEET    DEGREES   FT/SEC  DEG C

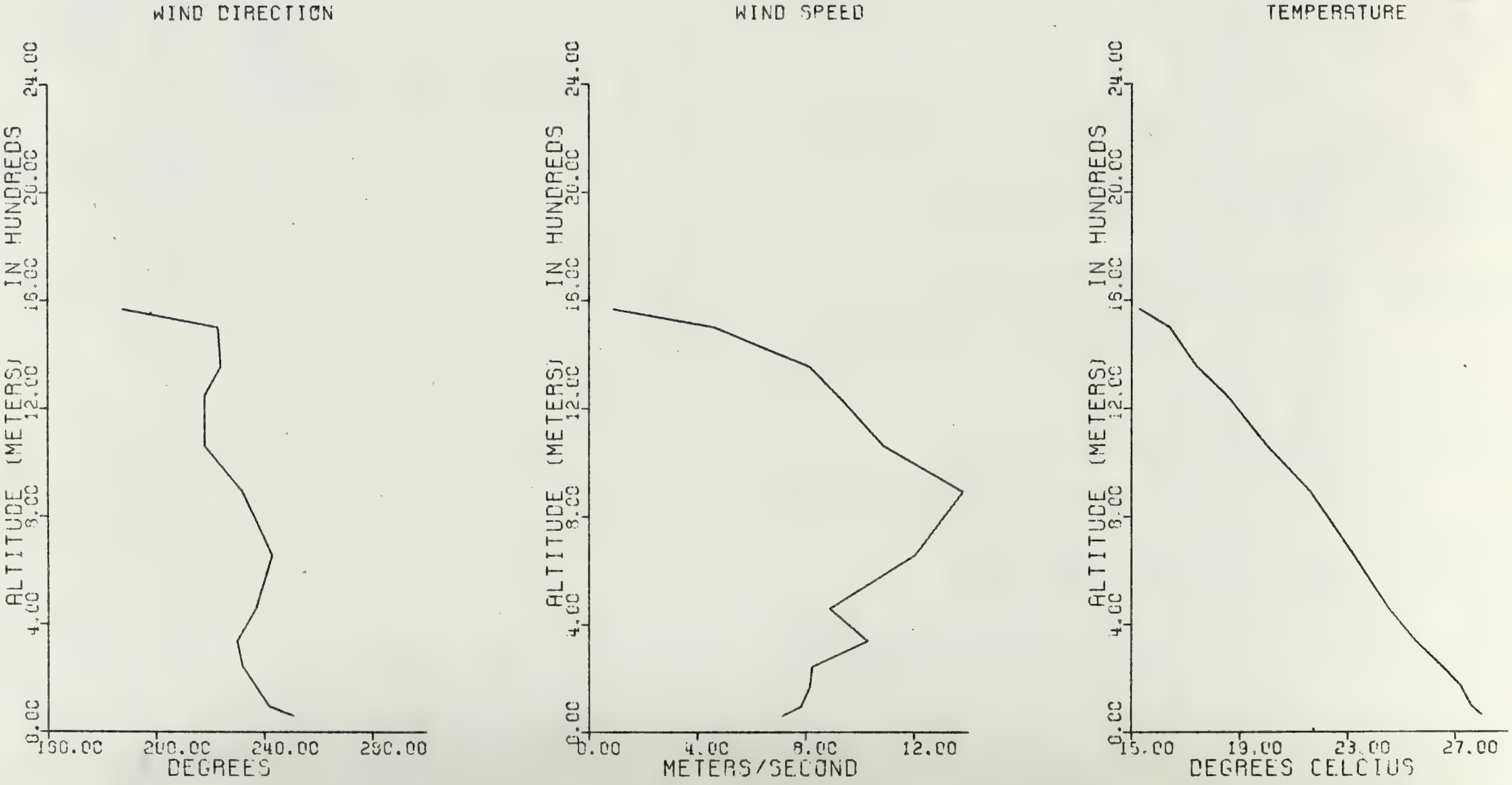
          197.     251.      23.4   28.0
          312.     242.      25.7   27.6
          558.     237.      26.8   27.2
          802.     232.      27.1   26.5
         1111.     230.      33.8   25.5
         1508.     237.      29.2   24.5
   2157.     243.        39.5   23.2
   2932.     232.        45.3   21.6
   3484.     218.        35.7   20.0
   4103.     218.        30.1   18.5
   4448.     224.        26.7   17.4
   4926.     223.        15.2   16.4
   5142.     188.         3.0   15.3


  HEIGHT   DIRECTION   SPEED   TEMP
  METERS    DEGREES    M/SEC   DEG C

     60.     251.         7.1   28.0
     95.     242.         7.8   27.6
    170.     237.         8.2   27.2
    244.     232.         8.3   26.5
    339.     230.        10.3   25.5
    460.     237.         8.9   24.5
    658.     243.        12.0   23.2
    894.     232.        13.8   21.6
   1062.     218.        10.9   20.0
   1250.     218.         9.2   18.5
   1356.     224.         8.1   17.4
   1501.     223.         4.6   16.4
   1567.     188.         0.9   15.3
```

C-B PIBAL SOUNDING

TIME 1330 DATE 7/31/78

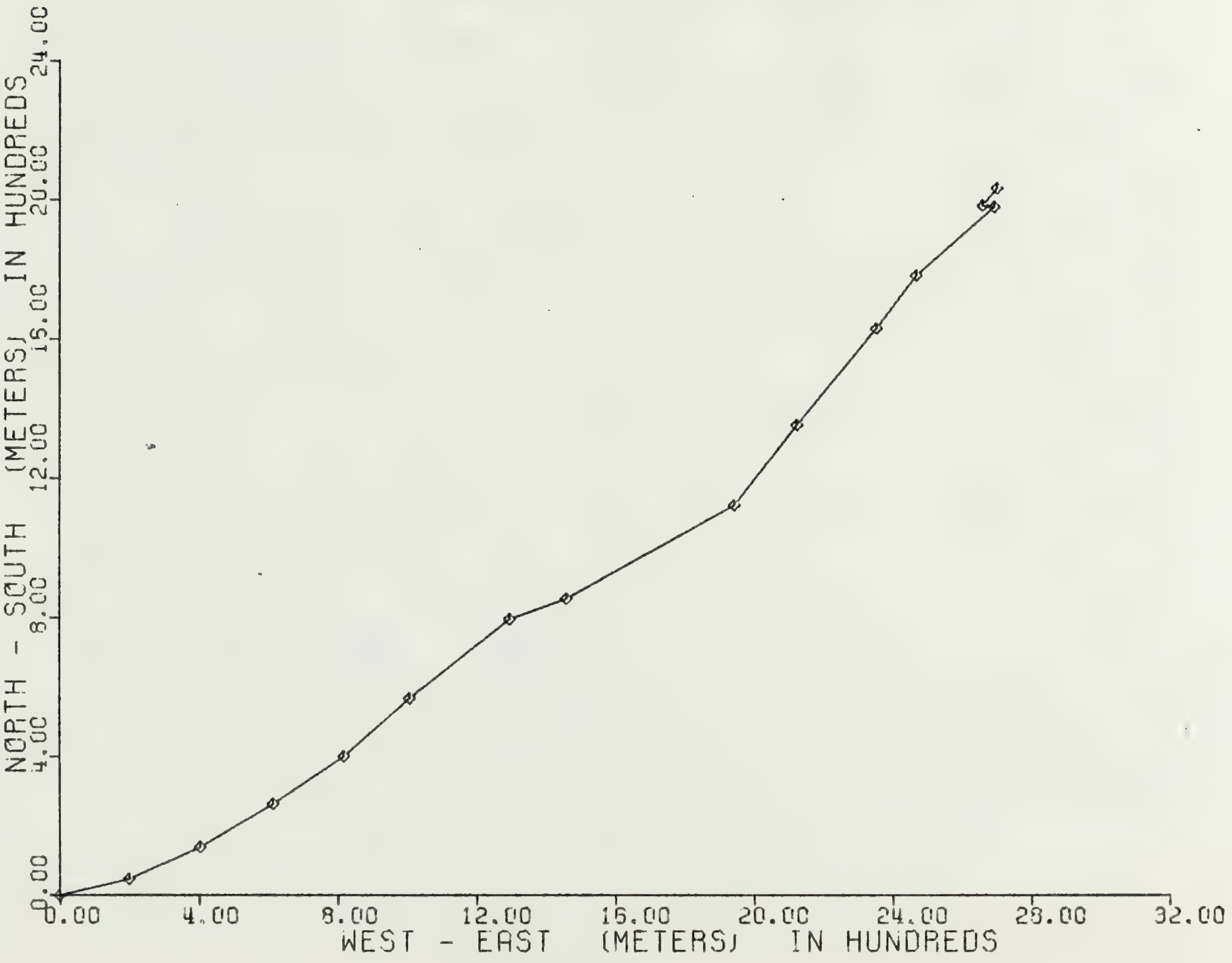


C-B PIBAL SOUNDING

TIME 1330 DATE 7/31/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
July 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3
MULTIPOINT RECORDER	82	82	82	82
DATA ACQUISITION SYSTEM	0	0	0	0
OTHER SYSTEMS				
MONTHLY TOTAL	82	82	82	82

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
July 1978
OCCIDENTAL OIL SHALE, INC.

	WS	WD	TEMP	MIXING HT	INVERS. HT	STB 50m	STB 200m	PART	PRECIP.
MULTIPOINT RECORDER	80	78	0						
DATA ACQUISITION SYSTEM	0	0	0						
OTHER SYSTEMS				78	78	78	78	100	100
MONTHLY TOTAL	80	78	0	78	78	78	78	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
July 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3	SO_2	H_2S	THC	CH_4	NMHC
MULTIPOINT RECORDER	97	97	97	97	93	94	67	58	67
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	97	97	97	97	93	94	67	58	67

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
July 1978
OCCIDENTAL OIL SHALE, INC

	CO	BAR. PRES.	SOLAR RAD.	WS 10m	WS 30m	WS 60m	WD 10m	WD 30m	WD 60m
MULTIPOINT RECORDER	62	87	11	93	93	93	93	93	93
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	62	87	11	93	93	93	93	93	93

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
July 1978
OCCIDENTAL OIL SHALE, INC.

	Hor. WD 60m	TMP 10m	DT 60-10m	RH	PART	PREC
MULTIPOINT RECORDER	0	93	86			
DATA ACQUISITION SYSTEM	0	0	0			
OTHER SYSTEMS				100	100	100
MONTHLY TOTALS	0	93	86	100	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 042
July 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	99	99	99	100
MONTHLY TOTALS	99	99	99	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 056
July 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	21	21	21	100
MONTHLY TOTALS	21	21	21	100

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 20
July 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	26	00	33.7	µg/m^3
		2	8	00	27.1	µg/m^3
		3	5	00	24.6	µg/m^3
		4	29	00	24.0	µg/m^3
		5	14	00	23.9	µg/m^3
Ozone	1-hr	1	11	11	157.0	µg/m^3
		2	11	14	157.0	µg/m^3
		3	10	16	151.0	µg/m^3
		4	10	17	147.0	µg/m^3
		5	10	15	143.0	µg/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
July 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Sulfur Dioxide	3-hr	1	2	6	12.0	$\mu g/m^3$
		2	1	1	10.0	$\mu g/m^3$
		3	1	4	10.0	$\mu g/m^3$
		4	1	7	10.0	$\mu g/m^3$
		5	1	10	10.0	$\mu g/m^3$
	24-hr	1	1	9	11.0	$\mu g/m^3$
		2	2	9	10.0	$\mu g/m^3$
		3	6	17	7.0	$\mu g/m^3$
		4	9	24	5.0	$\mu g/m^3$
		5	4	3	5.0	$\mu g/m^3$
Ozone	1-hr	1	7	12	145.0	$\mu g/m^3$
		2	20	19	143.0	$\mu g/m^3$
		3	18	17	139.0	$\mu g/m^3$
		4	21	18	137.0	$\mu g/m^3$
		5	17	16	135.0	$\mu g/m^3$

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
July 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	26	00	32.0	μg/m^3
		2	14	00	26.7	μg/m^3
		3	5	00	25.2	μg/m^3
		4	20	00	22.3	μg/m^3
		5	29	00	22.3	μg/m^3
Carbon Monoxide	1-hr	1	25	8	4200.0	μg/m^3
		2	26	9	4200.0	μg/m^3
		3	25	2	3900.0	μg/m^3
		4	25	3	3900.0	μg/m^3
		5	25	4	3900.0	μg/m^3
	8-hr	1	25	1	4000.0	μg/m^3
		2	26	2	3700.0	μg/m^3
		3	22	8	3600.0	μg/m^3
		4	23	8	3500.0	μg/m^3
		5	22	16	3300.0	μg/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 42
July 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	5	00	42.7	$\mu g/m^3$
		2	17	00	33.6	$\mu g/m^3$
		3	20	00	31.0	$\mu g/m^3$
		4	23	00	23.8	$\mu g/m^3$
		5	26	00	23.6	$\mu g/m^3$

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 56
July 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	26	00	23.9	$\mu g/m^3$
		2	5	00	22.1	$\mu g/m^3$
		3	14	00	21.9	$\mu g/m^3$
		4	29	00	19.6	$\mu g/m^3$
		5	11	00	19.2	$\mu g/m^3$

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DATA REPORT

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 020																	
NO				X													
NO_x				X													
NO_2				X													
O_3				X													
CO																	
SO_2																	
H_2S																	
WIND SPEED				X													
WIND DIRECTION				X													
TEMPERATURE				X													
MIXING HT.				X													
INVERSION HT.				X													
STABILITY 50m				X													
STABILITY 200m				X													
PARTICULATE				X													
PRECIPITATION				X													
SITE 023																	
NO				X													
NO_x				X													
NO_2				X													
O_3				X													
SO_2				X													
H_2S				X													
THC				X													

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 023 (Cont'd)																	
CH_4				X													
NMHC				X													
CO				X													
PRESSURE				X													
SOLAR RADITION				X													
WIND SPEED 10m				X													
WIND SPEED 30m				X													
WIND SPEED 60m				X													
WIND DIRECTION 10m				X													
WIND DIRECTION 30m				X													
WIND DIRECTION 60m				X													
HOR. WIND DIR. 60m																	
TEMPERATURE 10m				X													
TEMPERATURE 30m																	
TEMPERATURE 60m																	
DELTA T 60-10m				X													
RELATIVE HUMIDITY				X													
PARTICULATES				X													
PRECIPITATION				X													
EVAPORATION				X													
PILOT BALLOONS				X													

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 042																	
WIND SPEED 10m				X													
WIND DIRECTION 10m				X													
TEMPERATURE 10m				X													
PARTICULATE				X													
SITE 056																	
WIND SPEED 10m				X													
WIND DIRECTION 10m				X													
TEMPERATURE 10m				X													
PARTICULATE				X													

Malfunction Codes

Numerical Entry Code	Letter Code	Description
9000	CA	Calibration (calibration, system check)
9100	MT	Maintenance (changing paper, tape, charcoal)
9200	FO	Flame Out (on the GC-THC, HC, CH_4, CO)
9300	IM	Instrument Malfunction (instrument failures)
9400	PF	Power Failure (generator failure)
9500	RF	Recording System Failure (chart jams, runs out)
9550	NV	Not Visible (values were not within range of instrument i. e. inversion heights may exist beyond the full scale of the Acoustic Radar)
9600	LI	Local Interference (car nearby)
9650	OE	Operator Error (Field tech leaves switch in wrong position out of AV's control.)
9700	OS	Off Scale (at top of chart)
9750	IN	Interference (CO_2 interference on sulfur data, SO_2 interference in oxidant readings)
9800	SE	Special Experiment
9850	OR	Out for Repair (instrument removed from site with no replacement)
9900	VA	Variable Wind Direction
9950	CM	Calm (no wind direction when wind speed = 0)
9980	UN	Unlimited Ceiling (reported by NWS Stations)
9900		Blank (causes a space to be printed as in the beginning of a new month before a component starts)
8000	TR	Trace of Precipitation

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
2	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
3	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
4	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
5	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
6	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
7	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
8	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
9	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	2	0	0	0	0	0	0	0	0	4	2	2	2	2	1	4
10	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	4	2	2	2	2		4

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2	0	0	1	1	1	1	1	2	2	(CA)	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
3	1	1	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	(CA)	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	(CA)	0	0	0	(MT)	4	1	0	0	0	0	0	0	0	0	0	0	4
10	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	1	0	0	0	0	0	0	0	0	0	1
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	(MT)	(MT)	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	1	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	1
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	1	1	1	1	1	2	1	2	2	1	0	0	0	4	1	1	0	0	0	0	1	0	0	1		4

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
2	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
3	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
4	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
5	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
6	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
7	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
8	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
9	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	4	0	0	0	0	0	0	0	0	8	4	4	4	4	2	8
10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11	0	0	0	0	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	6	0	0	0	0	6	6	6	0	0	4	0	0	0	0	0	0	0	0	8	4	4	4	4		8

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	4	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2	0	0	6	2	2	11	8	9	6	2	0	0	0	0	0	0	0	0	2	0	2	0	4	2	2	11
3	2	4	4	6	6	6	6	8	2	2	2	2	0	0	0	0	0	2	0	0	0	0	0	4	2	8
4	0	0	4	4	0	0	0	0	(CA)	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7	2	0	0	0	0	0	0	(CA)	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
9	0	0	0	0	0	0	0	0	(CA)	0	2	0	(MT)	(MT)	2	0	0	0	0	0	2	0	0	0	0	2
10	0	0	0	0	0	0	2	2	0	0	0	0	0	(CA)	(CA)	2	0	0	0	0	0	0	0	0	0	2
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
16	0	0	0	0	0	0	0	0	0	0	0	0	(MT)	(MT)	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
18	0	0	0	0	0	0	2	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
19	2	0	2	0	0	0	2	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
20	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
21	0	2	0	0	0	2	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	2	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
25	0	0	0	2	0	0	0	0	(CA)	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	2
26	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
27	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	2	0	2	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	2
29	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
30	0	0	2	0	2	2	0	2	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	4	6	6	6	11	8	9	6	2	2	2	2	2	2	2	2	2	2	0	2	2	4	4		11

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
2	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
3	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
4	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
5	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
6	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
7	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
8	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
9	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	6	0	0	0	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0		6

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	4	0	0	9	6	6	2	2	0	0	0	0	0	0	0	0	2	0	0	0	4	0	2	9
3	0	2	4	4	4	4	4	4	2	2	2	2	0	0	0	0	0	2	0	0	0	0	0	4	2	4
4	0	0	4	4	0	0	0	0	(CA)	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
9	0	0	0	0	0	0	0	0	(CA)	0	2	0	(MT)	(MT)	0	0	0	0	0	0	2	0	0	0	0	2
10	0	0	0	0	0	0	2	2	0	0	0	0	0	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	2
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
16	0	0	0	0	0	0	0	0	0	0	0	0	(MT)	(MT)	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
18	0	0	0	0	0	0	2	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
19	2	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
20	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
21	0	2	0	0	0	2	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	2	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
25	0	0	0	2	0	0	0	0	(CA)	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	2
26	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
27	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	0	0	2	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	2
29	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
30	0	0	2	0	2	2	0	2	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	2	4	4	4	9	6	6	2	2	2	2	2	2	2	2	2	2	2	0	2	2	4	4		9

OZONE
(UG/M3)

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
2	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
3	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
4	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
5	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
6	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
7	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
8	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
9	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	61	61	61	67	65	65	65	63	61	51	43	37	29	26	53	67
10	29	33	27	29	37	31	33	41	57	73	73	73	71	71	73	75	73	69	61	59	47	37	37	29	51	75
11	27	27	27	26	24	22	20	31	41	59	59	65	59	59	57	65	67	59	67	57	51	41	47	31	45	67
12	22	22	20	29	33	31	27	31	39	51	53	55	57	59	61	63	65	59	61	47	47	47	41	29	43	65
13	29	18	20	18	12	6	10	18	41	53	53	57	57	51	55	53	57	55	57	49	57	39	35	29	39	57
14	12	8	12	18	22	18	10	27	41	39	43	61	61	55	55	51	49	53	41	41	29	18	10	8	33	61
15	8	10	6	8	4	6	0	10	18	33	39	43	45	49	45	51	55	59	57	41	24	22	16	18	27	59
16	20	20	18	18	18	12	12	29	45	47	51	57	59	57	59	55	59	59	59	47	35	27	24	22	37	59
17	20	20	18	12	20	24	22	27	45	51	55	51	51	57	55	61	61	51	51	49	49	43	41	41	41	61
18	33	22	12	6	10	6	8	8	22	53	71	63	63	69	73	67	63	61	57	41	35	22	20	20	37	73
19	24	22	24	22	24	20	12	29	41	51	61	75	78	80	80	77	75	84	78	57	55	51	43	41	51	84
20	45	47	49	47	49	41	27	35	59	61	73	75	73	71	67	69	75	78	71	75	55	55	45	45	57	78
21	43	41	43	41	43	41	41	47	61	65	59	59	61	55	59	61	65	63	59	57	61	51	43	39	53	65
22	43	49	51	51	57	59	57	61	55	55	59	69	65	67	71	67	71	73	71	59	57	57	47	55	59	73
23	59	43	45	43	41	31	31	43	57	63	63	67	71	71	75	65	69	61	57	39	39	39	33	35	51	75
24	35	35	35	35	39	39	39	41	57	59	63	65	59	57	59	61	61	65	69	51	41	35	27	29	49	69
25	20	27	29	33	27	29	31	43	37	37	55	57	59	57	61	59	69	57	51	37	33	31	27	27	41	69
26	26	27	29	24	31	27	22	24	43	57	65	59	59	59	57	57	57	55	51	39	27	31	27	26	41	65
27	22	27	26	26	29	27	27	20	29	51	75	73	71	69	71	77	75	78	75	55	41	35	31	35	47	78
28	29	22	18	20	18	16	16	22	39	47	49	55	57	61	59	55	59	59	57	37	35	31	22	20	37	61
29	24	26	26	27	26	24	22	31	43	49	57	71	73	69	69	73	73	71	65	49	39	37	35	35	47	73
30	39	39	39	39	37	33	29	39	53	61	77	73	71	61	61	59	57	59	47	37	29	31	33	35	47	77
31	33	31	35	39	39	35	33	47	55	61	59	59	61	61	57	55	55	53	59	45	39	39	39	33	47	61
AV	29	27	27	27	29	26	24	31	45	53	59	63	63	63	63	63	65	63	61	49	43	37	33	31	45	
PK	59	49	51	51	57	59	57	61	61	73	77	75	78	80	80	77	75	84	78	75	61	57	47	55		84

OZONE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	80	77	77	77	78	77	71	71	78	80	86	96	98	84	86	75	80	78	86	77	77	67	67	63	78	98
2	71	63	59	71	71	59	61	59	67	(CA)	96	100	98	96	94	96	92	92	94	86	77	94	88	78	80	100
3	67	55	55	49	39	35	41	47	59	69	77	86	90	96	96	98	96	96	92	84	78	75	71	73	73	98
4	67	71	59	61	65	67	61	71	75	80	94	100	104	106	108	100	98	100	100	92	90	88	86	82	84	108
5	84	86	90	94	82	82	78	77	96	100	100	94	94	96	96	96	96	98	96	92	84	80	82	84	90	100
6	84	78	80	86	78	84	67	78	88	98	100	106	98	98	98	100	100	100	100	100	63	78	75	78	90	106
7	77	75	75	78	77	77	63	77	88	98	100	100	100	98	100	100	90	88	88	84	80	77	76	75	84	100
8	77	78	82	88	80	82	75	78	92	100	102	100	100	102	100	100	100	100	98	96	80	77	78	76	90	102
9	90	90	86	86	94	88	80	88	100	100	104	108	110	106	108	106	104	102	102	100	92	90	88	90	96	110
10	88	90	90	92	86	88	92	96	104	110	116	120	120	120	118	118	114	112	110	102	94	92	88	90	102	120
11	92	96	94	98	98	96	88	94	106	114	118	118	118	118	116	124	122	118	114	100	100	98	98	104	106	124
12	102	102	98	96	100	100	98	98	104	116	114	114	118	120	124	124	126	124	118	116	110	108	102	102	110	126
13	86	67	59	67	59	43	57	71	94	104	104	108	106	104	106	118	114	116	114	110	108	98	80	69	90	118
14	63	61	49	51	67	57	57	75	86	88	100	100	96	96	98	98	98	98	88	88	78	59	53	55	78	100
15	59	45	55	53	63	63	55	59	63	(CA)	(IM)	(IM)	118	120	114	118	120	122	122	118	118	118	108	98	90	122
16	100	102	102	98	108	102	102	106	108	118	122	133	137	128	133	133	133	137	137	137	128	122	122	122	120	137
17	118	106	98	106	104	100	98	102	108	(CA)	124	122	118	118	124	124	124	118	104	104	104	98	98	98	110	124
18	98	96	88	135	78	78	65	88	88	(CA)	118	118	118	120	128	124	118	102	98	96	96	94	94	98	102	135
19	92	94	88	98	108	108	98	98	108	114	124	128	124	124	114	118	118	118	104	108	104	98	104	104	108	128
20	102	98	88	88	88	82	88	94	88	94	102	104	102	96	98	104	104	98	102	108	102	98	88	94	96	108
21	92	92	94	88	88	84	88	(CA)	118	118	118	112	124	124	128	133	128	128	124	118	118	118	114	118	112	133
22	118	124	118	108	114	108	114	114	118	118	118	118	116	124	124	124	128	128	124	118	108	114	114	110	118	128
23	114	114	114	108	104	98	98	108	108	118	118	128	128	133	133	133	137	133	118	108	98	108	94	98	114	137
24	98	98	98	98	98	108	108	104	114	118	118	133	137	133	137	143	143	143	137	128	118	118	118	122	120	143
25	124	124	124	118	118	118	114	108	98	118	118	118	118	118	124	124	128	124	120	108	104	98	98	102	116	128
26	104	104	104	102	98	98	98	98	102	122	124	124	124	124	124	124	124	124	118	106	108	114	118	122	112	124
27	124	124	124	124	128	124	108	104	118	137	147	147	147	147	147	147	157	161	153	147	137	133	128	128	135	161
28	124	114	108	98	92	98	88	88	92	102	108	(CA)	137	137	137	137	137	143	133	133	128	114	116	108	116	143
29	114	118	118	118	118	118	114	118	120	122	133	139	141	141	141	147	147	147	147	137	128	124	131	137	129	147
30	124	128	128	124	122	114	126	118	(CA)	129	135	133	133	124	122	124	122	116	108	106	108	98	100	104	120	135
31	100	104	106	96	100	108	108	108	118	120	118	122	124	124	118	114	118	114	108	104	104	98	98	102	110	124
AV	94	92	90	92	90	88	86	90	96	108	112	114	116	116	116	118	116	116	112	106	102	98	96	96	102	
PK	124	128	128	135	128	124	126	118	120	137	147	147	147	147	147	147	157	161	153	147	137	133	131	137		161

SULFUR DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3

HYDROGEN SULFIDE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	3	0	0	0	0	1	14
9	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	14
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	3	0	0	0	0		14

TOTAL HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	3300	4500	3900	4000	(IM)	(IM)	(IM)	(IM)	1000	1800	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	1000	1000	900	1000	1000	900	900	1900	4500
2	1000	900	900	1000	1000	900	1000	1000	1000	(CA)	(IM)	(IM)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	900	900	900	900	900	900	900	1000	1000	900	900	1000	1000
4	900	900	900	900	900	900	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
5	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1100	1000	1000	1000	1000	900	900	900	900	900	900	900	900	900	1000	1100
6	900	900	900	900	900	1000	900	1000	1000	1000	1000	1000	900	900	1000	900	900	900	900	1000	1000	1000	1000	1000	900	1000
7	1000	1000	1000	1000	1000	1000	1000	1000	1200	1000	900	900	1000	900	900	900	900	900	900	1000	1000	900	900	900	1000	1200
8	900	900	900	900	900	900	900	900	1000	1000	1000	900	900	900	900	1000	900	900	900	900	900	900	1000	1000	900	1000
9	1000	900	1000	900	1000	1000	1000	1000	(CA)	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
10	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
11	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	1000
12	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
13	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	800	800	800	800	800	900	900	1000
14	800	900	700	700	800	800	800	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	1000
15	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
16	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	300	300	300	300	300	300	300	300	300	300	300	300	300	300	600	1000
17	300	300	300	300	300	300	300	(CA)	900	900	900	900	900	900	900	900	900	900	900	1000	1000	1000	1000	900	700	1000
18	1000	900	900	900	900	900	900	900	1000	(CA)	(CA)	1000	900	900	900	900	900	900	900	1000	900	900	900	900	900	1000
19	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	700	700	700	700	700	700	700	700	800	900
20	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
21	800	800	800	800	800	800	800	(CA)	1000	900	900	900	1000	1000	1000	1000	1000	1000	900	1000	1000	1000	1000	1000	900	1000
22	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
23	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
24	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
25	900	900	900	900	900	900	900	900	(CA)	900	900	900	900	900	900	900	900	900	900	(IM)	(IM)	(IM)	(IM)	(IM)	900	900
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	(CA)	900	1000	1000	1000	1000	1000	1100	1000	1100	1100	1000	( )	1100
29	1000	1100	1100	1100	1100	1100	1100	1100	(CA)	1100	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1100	1100
30	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
31	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	900	1000	1000	1000	1000	1000	900	900	900	1000	1000	1000	900	1000	1000
AV	1000	1000	1000	1000	900	900	900	1000	1000	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	
PK	3300	4500	3900	4000	1100	1100	1100	1100	1200	1800	1100	1000	1000	1000	1000	1000	1000	1000	1000	1100	1000	1100	1100	1000		4500

METHANE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	1000	1000	1000	1000	1000	1000	1000	1000	900	900	900	900	900	1000	900	900	900	900	900	900	900	900	900	900	900	1000
2	900	900	900	900	900	900	900	900	1000	(CA)	1400	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1400
3	1000	1000	1000	1000	1000	1000	1000	1000	(CA)	900	1000	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
4	900	900	900	900	900	900	900	900	(CA)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
5	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	900	900	900	900	900	900	900	900	1000	1000
6	900	900	900	900	900	1000	900	1000	1000	1000	1000	1000	900	900	1000	900	900	900	900	1000	1000	1000	1000	1000	1000	1000
7	1000	900	900	900	900	900	1000	(CA)	1000	1000	900	900	1000	900	900	900	900	900	900	1000	1000	900	900	900	900	1000
8	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000	900	900	900	900	900	900	1000	1000	900	1000
9	1000	900	1000	900	1000	1000	1000	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
10	900	900	900	900	900	900	900	900	900	900	900	900	900	900	(CA)	900	900	900	900	900	900	900	900	900	900	900
11	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
12	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	800	900	900	900	900	900	900	900	800	900
13	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	600	800	800	700	600	500	700	600	800	900
14	500	500	400	300	300	200	100	100	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	700	900
15	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000	900	900	1000
16	900	900	900	1000	900	1000	900	900	900	900	300	300	300	300	300	300	300	300	300	300	300	300	300	300	600	1000
17	300	300	300	300	300	300	300	(CA)	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	700	900
18	900	900	900	900	900	900	900	900	1000	(CA)	(CA)	1000	900	900	900	900	900	900	900	1000	900	900	900	900	900	1000
19	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	700	700	700	700	700	700	700	700	800	900
20	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
21	800	800	800	800	800	800	800	900	1000	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000
22	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
23	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
24	900	900	900	900	900	900	900	900	900	900	900	900	900	800	800	800	800	800	800	800	800	800	800	800	800	900
25	800	800	800	800	800	800	800	800	800	700	800	700	800	800	800	700	700	600	700	(IM)	(IM)	(IM)	(IM)	(IM)	800	800
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	(CA)	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	( )	1000
29	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
30	1000	1000	1000	1000	1000	1000	1000	1000	(CA)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
31	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	900	900	900	900	900	900	500	900	700	800	900	900	900	900	1000
AV	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	
PK	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1400	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		1400

NON-METHANE HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2400	3500	2900	3000	(IM)	(IM)	(IM)	(IM)	100	900	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	100	100	0	100	100	0	0	1000	3500
2	100	0	0	100	100	0	100	100	100	(CA)	(IM)	(IM)	0	100	100	100	100	100	100	100	100	100	100	100	100	100
3	100	100	100	100	100	100	100	100	1000	100	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100	1000
4	0	0	0	0	0	0	0	100	1000	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1000
5	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	100	100	100	100	100	0	1000	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	1000
8	0	0	0	0	0	0	0	0	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
9	0	0	0	0	0	0	0	0	(CA)	0	0	100	100	0	0	100	0	0	0	0	0	0	0	0	0	100
10	0	0	0	0	0	0	0	0	0	100	100	100	100	100	900	0	0	0	0	100	100	100	100	100	100	900
11	100	100	100	100	100	0	100	100	100	100	100	100	0	0	100	100	100	100	100	100	100	100	100	100	100	100
12	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	100	200	100	100	100	100	100	100	200
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	100	0	100	200	300	100	300	100	300
14	300	400	300	400	500	600	700	700	200	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	700
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100
16	100	100	100	0	100	0	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
17	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100	0	0	100
18	100	0	0	0	100	100	0	0	0	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100
20	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	100
21	0	0	0	0	0	0	0	(CA)	0	0	0	0	100	100	100	100	100	100	0	100	100	100	100	100	0	100
22	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	0	100	0	0	0	0	0	100
23	0	0	0	0	0	0	0	0	100	100	0	0	100	100	100	0	0	0	0	100	0	0	0	0	0	100
24	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100	0	100
25	100	100	100	100	100	100	100	100	(CA)	100	100	100	100	100	100	100	100	100	100	(IM)	(IM)	(IM)	(IM)	(IM)	100	100
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(CA)	(CA)	0	0	0	0	0	0	100	0	100	100	0	( )	100
29	100	100	100	100	100	100	100	100	(CA)	100	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100	100
30	100	100	100	100	100	100	0	0	1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	1000
31	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	400	0	200	200	100	100	0	100	400
AV	100	200	100	200	100	100	100	100	200	100	0	0	0	0	100	0	0	100	0	0	0	0	0	0	100	
PK	2400	3500	2900	3000	500	600	700	1000	1000	900	100	100	100	100	900	100	200	400	200	200	200	300	100	300		3500

CARBON MONOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	200	300	200	300	300	300	200	200	200	300	300	300	300	700	200	200	200	300	300	200	300	300	200	200	300	700
2	300	300	300	300	300	300	300	300	300	300	600	300	200	300	100	200	200	200	200	200	300	300	200	300	300	600
3	300	300	200	200	200	200	200	300	(CA)	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	200	300
4	100	100	100	100	100	300	1100	100	(CA)	100	100	100	100	1100	200	100	100	100	100	100	100	100	100	100	200	1100
5	100	100	100	100	200	100	100	100	100	200	100	100	100	100	100	100	100	100	100	100	200	100	100	100	100	200
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	100	100	100	100	100	100	(CA)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	100	100	100	100	100	100	100	100	200	100	200	100	100	100	100	100	100	200	100	100	100	100	100	100	200
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	100	100	200
10	200	100	100	100	100	100	100	100	200	100	200	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200
11	100	100	100	100	100	100	100	100	(CA)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	200	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	100	100	100	100	200
13	100	300	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100	300
14	100	100	200	200	200	200	200	(CA)	300	200	300	300	200	200	200	200	100	200	500	300	200	200	200	200	200	500
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	200	200	200	300	200	200	300
16	200	200	100	300	300	200	300	200	200	300	300	300	200	300	200	100	100	100	100	100	100	100	200	200	200	300
17	100	100	200	100	200	200	100	100	200	200	200	100	100	200	200	100	100	100	100	200	300	300	300	200	200	300
18	100	200	200	200	200	200	300	500	600	(CA)	(CA)	100	100	100	100	100	100	200	200	200	200	200	100	200	200	600
19	200	200	200	200	200	200	200	200	200	200	200	200	100	100	100	200	100	100	100	100	100	100	100	100	200	200
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	200	200	200	200	100	200	200	100	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	200
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
24	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
25	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
29	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
31	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	200	200	200	200	200	200	200	200	200	200	200	200	100	200	100	100	100	100	200	100	200	200	200	200	200	
PK	300	300	300	300	300	300	1100	500	600	300	600	300	300	1100	200	200	200	300	500	300	300	300	300	300		1100

August 1978

PARTICULATE DATA 24-HOUR AVERAGE (UG/M3)
CB-TRACT
OCCIDENTAL OIL SHALE INC.

MO	DY	YR	TRL20	TRL23	TRL42	TRL56
8	1	78	21.9	21.4	16.3	19.0
8	4	78	24.3	25.6	21.9	19.9
8	7	78	25.4	25.6	22.8	19.0
8	10	78	32.1	64.1	(PF)	8.1
8	13	78	19.5	20.2	8.0	37.7
8	16	78	21.3	15.2	17.3	17.4
8	19	78	16.8	18.4	17.3	13.9
8	22	78	6.2	15.6	22.3	17.4
8	25	78	7.9	21.5	14.4	(PF)
8	28	78	25.0	11.7	11.0	11.8
		AV	20.0	23.9	16.8	18.2
		GM	18.1	16.8	16.0	16.8
		PK	32.1	64.1	22.8	37.7

WIND SPEED
METERS / SEC

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	3	2	2	2	2	1	1	2	1	2	3
2	1	1	1	1	1	1	1	1	2	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	2
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	2	3	2	3	3	3	3	2	2	1	1	1	1	1	2	3
4	1	1	1	1	0	1	1	2	1	2	3	3	3	4	3	3	3	2	2	2	1	1	1	2	2	4
5	2	2	2	2	1	2	2	2	1	1	3	4	3	2	2	3	2	2	1	2	1	1	2	1	2	4
6	2	2	2	1	1	1	1	1	1	1	2	2	3	2	4	4	4	3	2	2	1	1	1	2	2	4
7	1	1	1	1	1	1	1	1	1	2	3	4	3	3	2	2	2	2	1	1	1	1	1	2	2	4
8	1	1	2	2	1	1	1	2	1	1	2	2	2	2	2	4	4	4	1	1	1	1	2	2	2	4
9	2	1	1	1	2	2	1	2	2	2	2	2	3	4	2	3	3	3	4	2	1	2	2	2	2	4
10	3	3	4	3	3	4	3	2	3	3	3	3	2	3	3	4	3	3	3	2	2	1	2	1	3	4
11	2	2	2	2	1	2	2	3	2	2	2	2	2	4	3	2	1	2	1	4	1	4	1	1	2	4
12	2	2	2	3	4	3	3	3	2	2	4	4	4	5	5	4	4	5	4	1	1	2	2	1	3	5
13	2	1	1	3	1	1	1	3	4	4	4	4	4	2	3	4	5	4	3	4	4	2	4	1	3	5
14	2	1	2	4	3	2	1	4	3	2	4	2	4	2	3	2	2	3	4	3	1	1	1	1	2	4
15	1	1	2	1	2	2	2	1	1	1	1	2	2	2	2	3	3	3	2	1	2	2	2	2	2	3
16	2	3	3	3	2	2	2	2	(CA)	(CA)	4	6	4	6	6	5	4	5	4	2	3	2	3	2	4	6
17	2	2	2	3	3	2	1	3	5	4	(CA)	6	5	5	6	5	6	5	4	3	2	2	3	2	4	6
18	2	1	1	1	1	1	1	1	1	1	1	2	3	3	3	2	2	1	1	1	2	1	1	2	1	3
19	2	2	1	1	1	1	1	1	1	2	4	4	4	4	4	4	5	3	2	1	2	1	2	2	2	5
20	2	4	4	3	2	2	1	2	2	2	2	4	4	4	4	4	4	3	3	2	1	2	2	2	3	4
21	2	2	3	2	4	4	3	2	1	3	3	4	4	4	4	4	4	3	2	3	3	2	1	1	3	4
22	1	1	2	2	2	2	1	3	4	(IM)	4	4	5	4	3	4	4	5	4	3	2	3	2	3	3	5
23	3	2	2	1	1	1	2	3	4	4	5	5	5	4	4	4	4	3	2	1	1	2	2	2	3	5
24	1	2	1	1	1	2	2	3	2	2	4	3	4	4	3	3	3	3	2	2	1	1	2	2	2	4
25	1	1	2	2	2	2	2	2	2	2	1	5	4	3	4	4	3	4	2	1	1	1	2	2	2	5
26	2	2	2	1	2	1	3	3	2	2	3	3	3	4	3	3	3	2	2	1	1	1	2	2	2	4
27	2	2	2	3	3	1	1	1	0	1	1	2	3	4	3	4	3	3	2	1	1	2	2	2	2	4
28	1	1	1	1	1	1	1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	3	3	3	2	1	1	1	1	2	2	3
29	2	2	2	1	2	2	2	1	1	2	(CA)	(CA)	3	3	3	4	4	3	2	1	2	1	1	1	2	4
30	2	2	2	2	1	2	2	2	1	1	2	2	3	4	3	3	5	4	2	2	2	2	1	2	2	5
31	2	1	2	3	2	2	2	2	4	4	5	4	3	5	4	4	4	4	2	2	2	1	2	1	3	5
AV	2	2	2	2	2	2	2	2	2	2	3	4	3	4	4	4	4	3	2	2	2	2	2	2	2	
PK	3	4	4	4	4	4	3	4	5	4	5	6	5	6	6	5	6	5	4	4	4	4	4	3		6

WIND SPEED @10M
METERS / SEC

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	5	6	2	4	5	4	4	3	4	4	4	3	4	5	7	4	3	4	4	5	3	3	1	2	4	7
2	3	2	1	1	2	1	1	1	3	1	1	2	4	7	5	4	6	6	4	2	2	4	2	2	3	7
3	4	4	3	2	1	1	1	1	1	2	2	3	4	4	6	5	6	4	6	4	2	3	2	1	3	6
4	1	1	1	1	2	1	1	0	2	1	4	5	4	4	6	5	6	5	4	3	2	2	1	2	3	6
5	1	2	1	0	2	2	1	1	2	2	3	4	4	4	4	3	6	4	4	2	3	2	1	0	2	6
6	1	2	1	1	2	1	1	0	1	2	3	4	5	6	8	7	7	6	5	6	2	4	3	2	3	8
7	3	2	1	1	1	1	0	1	2	3	5	6	6	5	4	5	5	5	5	3	2	2	0	0	3	6
8	0	1	1	1	2	2	1	1	1	1	2	3	6	3	5	5	4	4	1	2	3	1	2	4	2	6
9	4	1	3	1	1	2	2	2	4	3	2	3	6	4	3	4	3	5	7	5	1	2	2	1	3	7
10	2	2	2	2	2	2	2	4	4	6	7	5	3	5	8	7	5	4	4	3	3	2	1	3	4	8
11	1	1	2	2	2	2	1	2	3	4	2	4	5	3	4	3	1	2	2	6	1	3	3	1	3	6
12	2	3	2	3	3	4	3	3	1	5	7	7	8	9	8	7	7	7	8	7	5	5	4	2	5	9
13	2	2	1	4	2	1	2	2	5	8	8	7	7	2	3	3	8	3	5	6	9	4	6	2	4	9
14	2	2	2	3	3	4	3	4	4	4	5	9	6	6	4	3	3	2	5	5	3	1	3	2	4	9
15	3	3	2	2	1	2	2	2	1	2	3	3	3	5	4	5	5	5	5	4	3	4	2	2	3	5
16	2	1	3	2	4	7	6	6	6	8	9	11	9	11	12	10	10	8	9	5	4	4	4	4	7	12
17	4	4	6	6	7	8	8	11	11	9	8	8	9	9	11	13	11	9	6	6	6	4	4	4	8	13
18	4	4	2	3	3	2	1	1	1	2	1	2	3	4	3	3	2	1	2	2	1	1	1	1	2	4
19	1	0	1	1	1	2	1	0	1	2	5	6	7	4	6	8	6	6	4	3	4	3	1	1	3	8
20	3	3	3	2	3	3	2	8	7	5	7	7	7	7	8	7	8	7	6	4	2	2	2	2	5	8
21	2	1	2	2	3	3	2	2	4	6	5	7	8	8	8	8	5	6	4	7	5	5	4	5	5	8
22	5	5	7	8	6	5	9	4	5	8	8	8	8	9	6	8	8	9	8	9	9	8	10	8	8	10
23	7	7	7	6	7	5	4	7	7	8	8	7	8	8	9	8	8	7	4	4	3	2	2	2	6	9
24	1	1	2	5	3	6	2	3	6	6	5	6	6	6	6	6	5	5	5	3	3	2	0	1	4	6
25	2	1	1	1	1	3	3	2	1	3	6	4	5	7	6	5	6	5	4	4	3	2	1	2	3	7
26	3	3	3	1	2	2	2	3	2	5	4	4	3	5	5	6	5	5	4	4	3	3	2	1	3	6
27	1	1	1	2	1	1	1	1	1	2	3	4	4	3	4	4	4	6	4	3	2	2	2	1	3	6
28	1	1	1	2	2	2	1	1	2	2	3	4	4	4	4	4	4	4	3	2	1	1	2	1	2	4
29	1	1	1	1	1	0	1	2	1	2	2	3	5	4	4	5	5	4	4	3	2	3	1	0	2	5
30	1	2	1	1	1	1	1	1	1	2	3	3	4	7	4	4	5	5	3	4	1	2	2	2	3	7
31	2	2	3	3	3	8	8	8	8	8	10	7	8	11	8	10	10	7	4	4	4	2	3	1	6	11
AV	2	2	2	3	3	3	3	3	3	4	4	5	5	6	6	6	6	5	4	4	3	3	2	2	4	
PK	7	7	7	8	7	8	9	11	11	9	10	11	9	11	12	13	11	9	9	9	9	8	10	8		13

WIND SPEED @30M
METERS / SEC

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	5	6	2	5	5	4	4	2	4	4	4	4	5	5	8	4	4	4	4	6	4	4	0	3	4	8
2	4	2	1	1	1	0	0	1	2	1	1	3	4	6	6	4	6	6	4	2	2	4	2	2	3	6
3	3	4	3	2	1	1	1	1	1	1	2	3	3	(MT)	3	4	4	4	5	4	3	3	2	1	3	5
4	1	1	1	1	1	1	0	0	1	1	3	4	4	4	4	5	6	6	4	3	3	4	0	1	3	6
5	1	1	0	0	1	2	1	1	1	2	3	4	3	4	4	3	4	3	4	3	3	1	1	0	2	4
6	1	1	1	1	1	1	1	1	1	2	3	4	5	5	7	6	7	6	5	5	1	3	3	2	3	7
7	3	1	1	1	1	1	1	1	2	2	5	5	5	4	4	4	6	5	5	3	2	2	0	0	3	6
8	0	1	1	0	1	1	1	1	1	1	2	2	5	4	2	3	4	2	1	3	3	1	3	5	2	5
9	4	2	3	2	1	2	2	2	4	2	2	2	4	4	2	4	3	5	6	6	2	2	2	2	3	6
10	3	3	3	2	2	2	2	3	3	6	6	5	3	4	8	7	5	4	4	3	3	2	1	2	4	8
11	1	2	1	2	3	2	1	2	3	3	2	4	4	4	4	3	3	2	2	6	2	4	3	2	3	6
12	2	3	2	3	3	4	3	3	1	4	6	7	8	8	8	8	7	7	8	7	6	6	4	2	5	8
13	2	2	2	3	2	1	2	2	3	7	6	6	7	2	3	3	8	7	5	7	8	4	4	2	4	8
14	1	2	3	3	4	3	2	4	4	4	6	10	6	5	3	3	2	2	8	4	4	1	2	1	4	10
15	3	3	3	3	1	1	1	2	1	1	2	3	2	4	4	5	5	5	4	5	3	5	2	2	3	5
16	2	2	4	1	4	7	7	6	6	7	9	8	10	8	11	9	8	7	8	6	5	5	5	5	6	11
17	4	5	6	7	7	8	8	10	9	9	8	9	8	10	9	7	10	10	5	6	5	4	4	5	7	10
18	4	4	2	2	2	2	1	1	1	1	1	2	2	2	3	2	2	2	1	2	2	2	1	1	2	4
19	1	0	1	2	1	2	1	0	1	1	4	6	7	5	6	8	6	5	4	3	4	3	1	1	3	8
20	2	3	2	1	4	4	2	7	7	5	6	5	6	8	8	8	6	6	7	5	2	2	3	2	4	8
21	3	1	2	2	3	3	3	2	4	5	5	6	7	8	6	5	6	5	4	7	6	5	5	5	4	9
22	6	6	8	8	6	9	9	4	5	6	7	6	9	8	7	7	7	8	8	9	8	8	9	8	8	9
23	8	7	7	6	7	6	4	7	7	8	8	7	8	7	8	8	7	5	4	4	4	2	1	1	6	9
24	2	1	3	6	4	7	4	4	6	6	5	6	6	5	6	5	5	5	5	4	4	3	1	1	4	7
25	2	2	1	1	1	2	3	2	1	3	6	4	4	8	5	6	5	4	5	4	3	2	1	2	3	8
26	4	3	3	1	1	2	2	3	1	4	5	5	3	4	4	5	6	5	4	4	4	4	4	2	4	6
27	1	1	1	2	1	1	1	1	1	1	3	4	4	3	3	4	4	6	4	3	3	3	2	2	3	6
28	2	1	1	1	2	2	2	1	2	2	2	3	3	4	4	4	4	4	3	2	1	1	1	1	2	4
29	1	1	2	1	1	1	0	2	1	2	2	4	4	3	3	5	4	4	4	3	2	2	1	0	2	5
30	1	1	1	1	1	1	1	1	1	2	2	3	3	5	3	5	6	5	4	4	3	1	1	1	3	6
31	3	4	4	4	4	7	8	7	8	7	9	7	7	9	9	9	9	7	4	4	5	3	3	2	6	9
AV	3	3	2	2	3	3	3	3	3	4	4	5	5	5	5	5	5	5	4	4	4	3	3	2	4	
PK	8	7	8	8	7	9	9	10	9	9	9	10	10	10	11	9	10	10	8	9	8	8	9	8		11

WIND SPEED @60M
METERS / SEC

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	6	6	2	4	5	5	5	3	4	4	4	4	5	4	8	4	4	4	5	7	4	4	1	2	4	R
2	3	2	1	1	0	0	0	0	2	1	1	2	5	7	7	4	7	7	4	2	2	4	3	2	3	7
3	4	4	4	3	2	1	1	1	1	1	2	2	3	4	4	4	4	4	6	5	3	4	3	1	3	6
4	0	1	1	0	1	1	1	0	1	1	3	4	3	4	5	6	5	6	4	4	3	4	1	1	3	6
5	1	1	0	0	1	1	1	1	1	2	1	4	4	3	4	3	5	4	4	4	3	2	0	1	2	5
6	1	1	1	1	1	1	1	1	1	2	2	4	5	6	8	7	7	7	6	7	1	2	3	2	3	8
7	2	1	1	1	1	1	1	1	2	3	4	5	7	5	4	4	5	5	5	4	3	2	1	1	3	7
8	1	2	1	1	1	1	1	1	1	1	2	2	5	3	3	4	3	4	1	3	4	1	3	5	2	5
9	4	3	3	3	1	3	2	2	4	2	2	3	5	4	4	3	3	4	6	7	3	2	1	1	3	7
10	2	3	3	2	2	2	2	3	4	6	6	5	3	5	9	7	5	4	4	3	2	1	1	2	4	9
11	1	1	1	1	2	1	1	2	4	4	3	4	3	4	3	2	2	3	3	5	3	4	4	3	3	5
12	4	4	2	3	4	4	4	4	1	4	2	7	8	8	8	8	7	8	8	8	6	6	5	2	5	8
13	3	3	2	4	2	1	1	2	6	8	7	7	6	3	3	3	8	8	5	8	9	4	5	2	4	9
14	2	2	3	3	5	4	3	4	4	4	8	12	7	5	4	3	3	2	8	6	4	1	2	1	4	12
15	3	2	3	4	2	2	1	1	1	2	2	3	3	4	4	5	6	5	5	6	4	6	3	2	3	6
16	3	4	5	3	6	9	8	6	6	8	9	9	11	10	11	10	8	8	9	7	7	7	7	6	8	11
17	5	7	7	8	8	10	9	11	10	10	9	9	9	11	10	11	12	9	6	6	6	5	5	6	8	12
18	4	4	2	2	3	2	2	1	1	1	1	2	2	3	3	3	2	2	2	3	2	2	1	2	2	4
19	2	1	1	2	1	2	1	0	1	1	5	6	7	4	6	8	7	4	4	4	4	3	1	1	3	8
20	3	2	3	2	4	5	1	8	8	5	6	5	7	8	8	7	7	7	7	4	3	2	3	2	5	8
21	3	1	1	2	3	3	2	1	4	5	5	6	7	8	6	7	5	6	5	8	7	5	6	6	4	8
22	7	6	8	8	6	12	10	5	5	8	8	5	8	8	7	8	8	10	8	10	10	10	9	10	8	12
23	8	9	8	8	8	7	5	6	7	8	8	7	8	6	8	8	7	6	5	5	4	3	1	2	6	9
24	3	3	4	8	6	8	4	4	6	6	5	6	6	5	6	6	5	6	5	5	6	4	1	1	5	8
25	2	1	1	1	0	2	2	2	1	3	6	4	4	8	5	6	6	5	5	6	6	1	1	1	4	9
26	3	3	2	1	1	1	2	3	2	4	5	5	4	4	4	5	5	5	4	5	5	5	5	4	4	5
27	1	0	1	2	2	1	1	1	1	1	3	4	4	3	3	4	4	6	5	4	4	4	4	3	3	6
28	3	2	1	1	3	2	2	1	2	2	3	4	3	4	4	4	4	4	4	3	2	1	1	1	3	4
29	1	1	1	1	0	0	0	2	1	2	3	3	4	4	4	4	4	5	4	4	2	2	1	0	2	5
30	0	1	1	1	1	1	0	1	1	2	3	4	3	6	4	5	7	6	4	5	3	1	2	1	3	7
31	5	6	6	4	6	9	9	8	8	8	9	8	7	10	7	10	10	8	4	4	5	3	4	3	7	10
AV	3	3	3	3	3	4	3	3	3	4	4	5	5	5	5	6	6	5	5	5	4	4	3	3	4	
PK	8	9	8	8	8	12	10	11	10	10	9	12	11	11	11	11	12	10	9	10	10	10	9	10		12

DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
MRI STATION = 042 PERIOD(8/01/78 TO 8/31/78)

	HOUR																							
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	3	3	3	4	3	5	4	4	4	9	4	4	4	5	5	4	4	4	4	4	3	3	3	3	4
2	2	1	1	1	2	2	2	2	2	2	2	3	5	7	5	6	7	5	3	2	3	4	3	3	3
3	4	4	3	1	1	1	1	2	2	2	3	4	5	5	5	5	5	5	4	3	3	2	2	2	3
4	2	1	1	1	1	1	1	1	2	2	4	9	5	5	5	5	5	4	4	3	3	3	2	2	3
5	2	2	2	2	1	1	1	2	2	2	4	4	4	4	4	5	4	3	3	2	2	2	2	2	3
6	2	2	2	2	2	1	1	1	1	3	3	4	5	6	6	6	7	5	5	3	2	2	3	3	3
7	2	2	2	2	1	1	1	1	3	4	4	5	5	5	4	5	***	***	***	3	3	1	1	1	3
8	1	2	1	1	1	1	1	1	2	2	3	4	5	3	3	4	2	2	2	2	2	2	4	4	2
9	3	2	2	2	2	2	2	3	3	2	3	3	6	5	4	4	4	5	4	3	3	3	2	2	3
10	2	3	3	3	3	3	3	4	5	6	5	5	5	7	7	6	5	4	4	3	2	2	3	2	4
11	2	2	2	2	2	2	2	3	3	2	3	3	3	3	3	3	3	4	5	3	4	3	2	2	3
12	2	3	3	3	3	3	2	2	4	6	7	8	8	8	7	7	7	8	4	3	3	2	2	3	5
13	3	3	2	2	2	3	3	4	8	7	8	6	3	4	5	8	6	5	6	7	5	3	2	2	4
14	2	2	3	3	3	3	4	4	4	5	7	6	3	3	3	2	2	6	3	2	2	2	2	2	3
15	2	2	4	4	4	3	1	1	2	2	2	3	3	4	5	6	5	5	4	3	3	2	3	3	3
16	3	3	3	2	2	3	5	6	7	7	13	9	9	10	10	9	9	7	5	4	3	3	3	2	6
17	2	2	3	6	6	4	7	9	10	8	8	8	9	10	10	10	8	5	4	4	3	3	4	3	6
18	3	2	2	1	1	1	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	2	2	2
19	2	2	2	2	2	1	1	1	1	4	5	7	5	6	7	7	6	4	3	4	3	3	3	3	3
20	3	4	3	3	3	2	2	4	4	5	6	6	8	7	7	6	6	6	4	2	3	3	2	2	4
21	2	2	3	3	3	2	2	2	5	6	6	7	8	7	7	6	6	4	5	4	3	3	3	3	4
22	3	2	3	4	5	6	3	3	6	7	5	7	8	7	7	8	7	7	5	4	4	5	7	7	5
23	6	5	6	7	6	4	4	7	7	8	9	7	7	7	8	7	6	4	3	3	2	2	2	2	5
24	2	3	3	3	3	2	2	3	5	6	6	6	6	6	5	5	6	5	4	3	2	2	2	2	4
25	2	2	2	2	2	2	2	2	3	3	5	5	5	6	5	6	5	4	4	3	2	2	2	3	3
26	3	3	2	2	3	3	3	3	3	5	4	4	5	5	5	5	4	4	4	3	2	2	2	2	3
27	2	2	2	3	2	1	1	1	2	2	4	4	4	3	4	5	5	4	3	2	2	1	1	1	3
28	1	1	1	1	1	1	1	2	2	3	4	4	4	4	4	4	4	3	2	2	2	1	1	1	2
29	2	2	2	2	2	1	1	1	2	3	3	4	4	4	4	4	4	4	3	2	2	2	2	2	3
30	2	2	2	2	2	1	1	1	1	2	2	3	5	5	5	4	5	4	4	3	3	3	1	1	3
31	2	2	3	3	3	3	3	6	7	8	8	7	7	9	8	8	8	6	4	4	3	3	2	2	5
MEAN	2	2	2	3	2	2	2	3	4	4	5	5	5	6	5	6	5	5	4	3	3	2	2	2	4

TOTAL NUMBER OF OBSERVATIONS = 741

NOTE: **** = MISSING DATA

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                         DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
                         MRI STATION = 056 PERIOD( 8/01/78 TO  8/31/78)

                                           HOUR
DAY    1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24   MEAN

 1     1   2   2   2   2   3   2   2   3   4   4   3   2   3   3   3   2   2   3   2   2   2   2   2      3
 2     2   2   2   1   1   1   2   2   2   2   2   2   3   4   4   4   4   3   2   2   2   2   1   1      2
 3     1   1   1   1   1   1   1   1   2   2   4   3   3   4   4   4   3   3   4   2   2   2   1   2      2
 4     1   1   2   1   1   1   2   2   2   3   3   3   4   5   4   5   4   3   3   2   2   2   2   2      2
 5     2   2   2   2   1   1   1   1   2   1   3   4   3   3   3   3   3   2   2   2   1   2   1   2      2
 6     2   2   2   2   1   1   1   1   1   1   2   4   4   3   5   5   5   3   4   2   2   2   2   2      2
 7     2   2   2   1 *** *** ***   3 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***      2
 8   *** *** *** *** *** *** *** *** *** ***   3   4 *** *** *** *** *** *** *** *** *** *** *** ***      3
 9   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
10   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
11   *** *** *** *** *** *** *** *** ***   2   2 *** *** *** *** *** *** *** *** *** *** *** *** ***      2
12   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
13   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
14   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
15   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
16   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
17   *** *** *** *** *** *** *** *** *** ***   5   5   6   6   5   5 *** *** *** *** *** *** *** ***      5
18   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
19   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
20   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
21   *** *** *** *** *** *** *** *** *** *** *** *** ***   5   4   3   3   2   2   2   1   1   1   1      2
22     1   1   2   2   2   2   2   2   2   2   2   4   5   5   3   3   3   2   2   2   2   2   2   2      2
23     2   2   2   2   2   2   2   3   4   5   5   5   5   4   5   5   4   3   2   2   2   2   2   2      3
24     2   2   2   2   2   2   2   2   2   3   4   4   4   4   4   3   3   2   2   2   2   2   2   2      2
25     2   1   1   2   2   2   1   1   1   2   4   4   3   3   4   3   3   2   2   2   2   2   2   2      2
26     2   2   2   2   2   2   2   2   3   3   3   3   3   3 *** *** *** *** *** *** *** *** *** ***      2
27   *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   ****
28   *** *** *** *** *** *** *** ***   3   3   3   3   3   3   3   3   3   3   2   2   1   1   1   1      2
29     2   2   1   1   1   1   1   1   3   3   3   3   3   3   3   3   3   2   2   2   2   2   2   2      2
30     2   1   1   2   2   2   2   2   2   2   2   3   3   4 *** *** ***   2   2   2   2   2   2   2      2
31     2   2   2   2   2   2   2   3   4   5   5   2   3   6   6   6   2 *** *** *** *** *** *** ***      3

MEAN   2   2   2   2   2   2   2   2   2   3   3   3   4   4   4   4   3   2   2   2   2   2   2   2      2

                            TOTAL NUMBER OF OBSERVATIONS = 358

NOTE: ****.= MISSING DATA
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WIND DIRECTION
DEGS

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	112	40	50	120	22	360	112	95	75	145	125	100	112	145	120	90	125	165	340	120	100	100	95	110	99
2	112	100	110	95	100	100	95	190	315	325	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	( )
3	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	(OE)	292	270	185	360	330	310	337	340	360	150	67	90	100	95	5
4	95	95	95	75	67	100	112	120	230	285	275	315	315	310	360	15	360	325	5	67	90	110	165	95	54
5	112	110	112	110	100	112	95	125	135	190	280	10	360	355	360	285	360	360	35	80	110	85	95	110	78
6	100	100	100	85	95	95	22	110	120	170	292	280	337	255	337	360	320	300	320	350	40	90	30	110	42
7	360	100	112	110	95	95	115	130	230	285	10	10	5	40	50	315	5	40	67	75	80	45	110	100	62
8	95	95	110	110	230	110	125	112	185	215	195	202	22	360	265	150	202	320	95	85	95	40	112	112	123
9	145	145	100	100	112	95	90	80	112	145	235	247	270	285	(VA)	135	130	145	130	112	100	112	130	112	126
10	135	140	140	140	135	135	140	135	112	175	165	230	300	247	225	180	130	130	125	85	85	100	130	105	142
11	100	100	112	105	112	112	112	125	100	135	(VA)	305	305	35	22	(VA)	305	292	220	330	(VA)	100	112	90	91
12	95	95	120	112	112	112	140	140	135	95	175	170	180	202	235	230	235	190	140	(VA)	135	90	(VA)	(VA)	146
13	325	112	(VA)	105	22	112	100	112	140	170	195	305	305	135	112	170	145	170	165	140	(VA)	(VA)	292	(VA)	138
14	337	(VA)	(VA)	112	100	280	(VA)	292	305	360	185	170	165	5	5	305	135	285	330	320	140	30	70	95	3
15	112	130	125	105	112	120	100	105	120	150	(VA)	50	(VA)	(VA)	160	175	215	230	175	112	100	112	112	105	127
16	125	112	125	125	95	90	90	150	175	180	210	202	215	220	202	202	215	215	220	180	112	100	100	100	157
17	100	100	100	100	100	112	120	180	190	180	210	215	215	215	240	220	230	337	337	315	315	325	320	315	205
18	310	355	100	100	100	105	112	100	112	125	130	(VA)	(VA)	285	(VA)	275	265	(VA)	30	75	105	105	95	112	95
19	90	100	95	85	95	100	(VA)	90	280	292	285	190	215	225	240	225	230	235	265	140	112	90	105	112	155
20	112	140	135	110	105	95	355	300	120	100	195	175	225	220	230	215	170	190	145	(VA)	112	112	110	125	146
21	120	90	130	112	135	140	120	130	100	230	215	235	190	202	240	250	270	275	270	130	120	100	105	85	156
22	80	100	120	100	120	135	75	90	100	165	145	175	202	195	195	160	170	160	140	110	120	95	125	125	133
23	125	95	105	85	95	112	120	125	170	175	190	180	190	195	202	195	202	210	225	90	95	100	100	100	144
24	90	120	110	90	100	90	110	112	140	157	202	190	225	215	225	225	260	265	220	75	100	90	112	120	143
25	100	100	90	100	112	112	120	112	112	95	130	120	95	220	220	247	235	220	175	85	100	100	120	100	124
26	105	120	130	110	112	110	120	140	120	(VA)	265	175	215	195	202	230	215	255	280	85	100	100	110	110	146
27	100	100	110	125	112	90	110	100	(VA)	305	330	270	210	292	320	320	320	320	340	110	110	120	112	95	78
28	95	100	100	110	100	112	100	120	120	(CA)	292	275	320	275	270	265	310	330	350	360	75	105	105	105	72
29	95	105	120	112	100	112	125	125	315	300	280	292	292	300	300	300	337	350	325	50	105	100	100	95	49
30	120	120	110	112	100	112	112	112	110	310	350	(VA)	(CA)	285	315	315	135	90	125	112	110	105	90	100	101
31	95	85	112	120	110	95	90	105	185	195	230	195	(CA)	215	225	225	225	230	157	170	100	(VA)	135	110	153
PV	99	103	110	106	102	106	106	120	137	182	225	223	242	249	254	239	233	259	210	92	100	93	106	104	113

WIND DIRECTION @10M
DEGS

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	140	340	(VA)	150	160	15	145	30	70	70	90	100	165	145	180	50	140	140	160	135	140	175	60	85	117
2	135	180	275	180	180	390	335	345	280	295	350	340	310	285	305	315	315	285	315	80	150	155	300	195	294
3	270	285	280	270	235	230	270	305	335	310	310	320	315	(MT)	330	330	345	325	10	30	85	150	185	350	307
4	230	45	(VA)	350	245	(VA)	55	350	10	295	330	325	325	305	350	350	335	355	10	65	100	145	315	205	344
5	125	205	(VA)	45	255	135	290	80	55	45	310	285	(VA)	335	340	330	350	5	30	110	160	225	350	345	0
6	125	250	120	150	220	265	240	230	245	315	310	345	340	330	350	350	330	305	305	345	280	210	200	105	285
7	185	210	225	285	310	240	360	310	290	290	5	15	30	20	55	10	40	25	10	45	115	210	130	(VA)	350
8	(VA)	190	110	60	155	160	30	75	330	25	(VA)	(VA)	45	55	5	170	220	10	190	65	145	330	90	140	87
9	135	145	215	120	120	95	95	95	215	245	340	25	220	255	160	110	130	175	145	175	90	60	110	125	136
10	105	105	110	120	105	100	110	160	180	200	220	225	(VA)	255	205	185	160	135	185	160	210	(VA)	(VA)	140	159
11	160	60	45	115	100	95	100	105	195	190	260	(VA)	200	210	360	50	325	245	200	195	310	95	145	170	145
12	150	170	205	145	165	165	110	100	65	195	205	190	195	215	225	240	205	160	170	175	195	160	185	245	179
13	280	95	120	125	165	180	145	120	155	195	190	210	280	290	75	335	165	180	200	175	180	225	280	255	185
14	245	265	260	80	125	220	270	295	305	290	240	210	205	355	5	15	(VA)	355	295	320	350	40	210	195	284
15	140	180	180	185	200	195	80	85	10	60	160	80	245	230	215	195	195	220	190	180	180	185	150	110	172
16	65	190	165	40	170	180	185	165	170	195	185	205	210	210	210	200	205	210	215	205	190	185	180	185	188
17	200	220	215	205	190	180	130	185	195	210	210	205	210	225	210	240	225	340	340	335	345	345	340	330	230
18	305	305	265	225	235	220	315	280	150	125	15	10	345	285	25	320	360	15	290	40	115	150	190	180	302
19	190	325	340	120	150	155	315	(VA)	65	35	220	200	195	175	195	235	215	215	215	200	170	180	80	90	184
20	170	105	100	70	75	70	45	210	200	185	200	215	210	205	215	200	200	200	175	185	140	120	130	120	163
21	130	100	160	170	120	95	95	75	250	205	230	205	205	220	210	240	220	230	215	165	150	135	150	185	176
22	205	160	165	155	180	175	170	165	165	175	165	180	200	205	195	180	180	170	165	175	170	185	180	185	177
23	180	180	180	185	180	170	155	165	190	195	200	205	195	215	210	195	210	215	210	200	200	215	85	115	188
24	15	140	10	180	190	180	185	55	195	190	200	220	200	215	215	230	245	240	235	210	200	275	85	115	200
25	145	150	205	(VA)	120	160	145	105	70	215	200	100	160	210	195	210	230	220	210	205	195	70	80	155	168
26	155	145	110	275	130	165	165	115	360	220	225	200	235	205	205	230	215	225	220	215	200	190	200	355	197
27	355	205	350	195	110	125	5	250	265	330	335	300	335	330	300	320	325	320	320	265	225	320	330	75	313
28	75	115	235	240	240	215	235	295	310	290	300	300	295	335	330	350	340	330	360	5	65	200	210	140	296
29	215	(VA)	115	345	230	360	(VA)	290	290	310	310	320	330	250	340	310	340	355	305	255	215	210	110	125	297
30	170	205	100	215	225	85	230	50	15	345	260	215	310	290	310	175	160	70	145	165	(VA)	60	85	60	157
31	200	190	175	60	190	185	180	185	185	195	235	195	200	225	225	215	210	225	230	215	200	275	200	290	207
PV	165	173	173	152	175	160	148	113	238	238	248	236	242	250	257	261	234	255	228	176	168	177	146	142	206

WIND DIRECTION @30M
DEGS

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	135	335	(VA)	145	160	(VA)	140	55	65	110	110	100	165	140	180	30	130	135	165	145	155	165	120	90	127
2	120	150	285	140	200	110	305	330	295	285	325	315	330	290	300	320	305	290	315	85	135	160	305	165	291
3	290	280	285	275	265	260	275	295	325	290	275	330	310	325	355	355	345	0	25	50	90	145	150	25	317
4	270	45	85	325	280	270	65	(VA)	10	305	310	325	325	335	25	350	350	355	25	65	125	140	130	225	353
5	190	190	125	115	115	170	280	120	100	20	320	285	280	320	35	350	15	35	35	105	150	135	5	60	69
6	(VA)	(VA)	(VA)	145	235	305	270	(VA)	240	335	350	340	335	330	5	5	345	310	325	0	320	225	225	120	316
7	230	210	210	305	20	270	270	330	310	320	30	20	25	50	40	35	45	45	30	50	105	145	85	85	22
8	70	160	145	150	85	185	50	90	20	35	(VA)	(VA)	65	80	10	210	235	15	170	90	150	345	85	145	97
9	165	105	155	205	160	135	120	115	230	265	340	70	235	310	(VA)	120	150	210	160	195	145	75	185	140	159
10	130	135	130	160	135	145	135	175	200	220	220	245	335	265	225	180	175	147	198	165	213	213	348	123	180
11	195	207	115	143	130	133	127	123	213	215	(VA)	210	235	(VA)	7	70	330	263	243	340	297	125	180	195	193
12	183	183	193	162	175	177	130	132	115	223	210	200	215	230	245	233	240	205	185	190	207	183	200	303	196
13	300	105	120	110	173	30	180	140	150	215	215	223	315	113	80	250	190	190	215	195	195	175	303	315	184
14	255	280	280	(VA)	160	293	285	310	315	297	247	237	220	350	15	14	(VA)	5	315	340	360	57	210	168	299
15	157	125	165	185	100	190	100	115	5	25	160	(VA)	(VA)	240	210	200	210	230	215	200	210	213	207	165	181
16	165	205	195	183	195	195	200	195	177	210	200	215	233	228	230	225	213	237	233	225	220	210	210	213	210
17	223	233	245	223	215	210	207	207	210	220	225	237	225	230	215	250	243	5	342	345	350	355	350	348	249
18	325	320	300	258	282	268	300	283	153	120	(VA)	13	360	285	360	318	345	5	327	40	125	140	165	185	316
19	183	163	350	125	163	150	330	(VA)	72	18	243	210	210	215	220	255	243	245	233	233	185	195	50	(VA)	209
20	170	138	130	(VA)	(VA)	150	105	215	210	207	210	215	220	240	240	207	215	225	195	210	168	150	130	135	187
21	120	145	155	170	135	120	110	85	265	220	230	185	230	240	235	260	220	250	225	185	180	175	175	210	191
22	230	180	190	170	200	210	180	185	190	195	185	210	215	230	215	200	195	195	195	200	195	205	210	205	199
23	207	207	207	207	210	190	185	192	220	210	215	235	225	235	225	222	218	235	228	228	215	210	60	207	213
24	220	190	213	207	210	210	210	203	207	210	230	240	230	240	225	235	255	260	255	233	223	230	90	123	219
25	150	163	168	90	117	200	165	140	95	240	150	130	140	215	215	228	237	245	235	223	215	108	70	145	171
26	155	140	143	300	130	170	168	125	(VA)	233	233	223	243	225	223	258	230	243	245	243	225	220	215	213	211
27	35	90	345	200	165	135	130	260	285	337	348	335	325	340	330	335	330	345	330	330	350	340	340	60	342
28	63	73	7	300	285	255	253	300	310	310	305	305	318	340	348	350	343	5	15	30	90	193	240	210	324
29	255	(VA)	110	330	340	40	7	310	300	300	327	360	333	290	330	340	7	355	325	270	240	235	150	118	324
30	150	225	105	150	300	123	355	60	30	350	245	237	315	315	300	190	175	85	150	180	175	(VA)	135	170	172
31	213	205	203	185	200	210	205	205	213	215	253	220	223	243	233	240	230	243	240	225	225	250	225	273	224
PV	188	171	170	180	180	187	182	168	238	261	249	250	266	270	280	270	250	279	249	201	184	179	164	162	218

WIND DIRECTION @60M
DEGS

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	130	350	330	135	150	(VA)	135	(VA)	65	100	120	90	175	155	185	(VA)	120	125	165	140	150	175	210	100	135
2	110	155	290	120	180	195	310	300	290	285	335	320	325	295	305	330	310	290	320	95	135	165	310	170	298
3	295	290	290	295	300	295	295	295	315	295	305	335	315	(MT)	345	350	345	340	20	25	15	115	115	(VA)	324
4	120	215	(VA)	(VA)	285	270	245	(VA)	350	315	320	315	330	320	350	350	345	360	10	45	85	105	140	185	336
5	215	175	125	145	(VA)	130	290	115	65	15	335	295	310	300	355	320	345	5	25	65	115	125	325	60	23
6	145	275	235	150	175	315	390	220	240	320	330	330	335	330	355	360	330	310	310	350	295	235	230	65	305
7	205	125	305	290	315	265	245	325	300	315	20	10	15	30	35	25	30	25	10	40	80	115	125	105	9
8	145	165	160	170	130	155	100	90	(VA)	30	(VA)	(VA)	35	(VA)	25	190	220	20	135	55	125	335	55	125	111
9	160	115	130	190	145	125	115	110	215	245	330	20	230	285	150	115	135	190	145	175	180	190	150	130	158
10	130	130	135	160	150	150	155	180	195	215	215	245	315	260	210	177	162	143	180	153	177	213	337	105	176
11	113	198	155	138	125	(VA)	140	105	210	203	245	(VA)	225	210	350	43	305	260	235	335	300	113	163	183	188
12	173	180	180	138	155	160	125	130	127	215	195	195	200	215	225	225	223	200	168	180	195	175	185	285	184
13	277	83	93	120	150	60	163	147	195	203	210	215	295	(VA)	75	255	173	180	200	185	195	195	290	320	185
14	255	285	265	105	145	240	270	297	300	280	250	217	217	345	360	350	(VA)	350	300	340	345	30	210	140	288
15	115	143	140	160	165	180	135	120	(VA)	30	145	120	(VA)	240	210	195	195	220	203	190	200	210	207	205	175
16	195	200	185	203	180	177	185	180	165	198	205	213	215	213	215	210	210	220	223	213	205	205	200	200	201
17	220	220	223	210	200	195	195	195	207	215	220	215	213	225	225	240	230	350	345	330	345	345	345	343	238
18	325	320	308	270	285	283	305	300	138	120	(VA)	350	360	300	350	320	345	350	350	20	90	120	105	123	339
19	150	160	(VA)	120	123	143	(VA)	60	57	23	228	210	207	200	195	243	223	232	228	215	180	180	27	50	177
20	190	135	162	160	165	150	48	195	195	190	205	203	210	225	220	195	210	205	188	213	175	140	130	105	180
21	120	55	115	150	135	115	110	75	260	210	215	220	205	220	240	250	225	230	220	175	160	155	165	195	181
22	205	175	190	165	195	190	175	175	180	190	170	190	205	210	200	190	185	180	175	185	180	190	195	195	187
23	190	193	195	195	190	180	173	172	200	203	207	215	225	210	210	210	210	220	220	215	210	200	175	190	200
24	200	193	195	185	190	190	188	190	198	198	210	225	215	225	225	225	243	243	237	225	223	215	260	60	211
25	117	120	153	(VA)	120	192	165	120	75	210	135	127	125	200	203	216	240	225	225	217	215	(VA)	5	135	168
26	143	127	125	300	108	150	160	117	(VA)	227	210	205	225	210	225	235	215	225	230	237	230	222	215	210	201
27	195	37	195	190	180	195	120	280	283	327	325	305	325	315	318	337	325	333	324	315	248	330	345	27	306
28	33	30	350	315	303	260	243	275	293	293	297	300	300	325	343	333	330	345	360	15	63	93	157	255	323
29	255	233	135	97	337	270	7	300	280	295	320	337	320	255	325	318	348	350	315	285	247	245	223	108	298
30	183	230	120	125	295	210	345	45	18	345	235	210	300	310	303	195	168	60	120	150	168	240	195	205	209
31	198	195	193	192	193	195	200	190	195	198	245	195	210	225	225	230	217	237	235	223	215	250	228	243	213
PV	173	172	176	166	173	191	173	165	225	248	242	243	259	252	268	257	242	268	239	199	183	180	193	147	215

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                 DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
                   MRI STATION = 042 PERIOD( 8/01/78 TO  8/31/78)

                                                       HOUR
DAY    1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24     MEAN

  1  133  320  234  142   37   46  119   82   83  113   74   69   32  119  161   69  132   46   91  146   94   80   77   79       91
  2  132   99   91   81   60   95   49  274  270  232  214  267  332  281  313  296  304  297  286  132  250  159  244  140      260
  3  264  277  252  256   64   82   21  243  286  256  247  114  258  262  335  348   80  343   26   37  100  147  157   80      314
  4   91  120  109  117  342  100   91   52  330  257  331  296  311  308  284  341  315  337  344   64  123  134  325   91       15
  5   96   76   85   91   88  113   86   88   47   88  326  331  298  300  280  104   28  349   45   75  133   70   45   85       61
  6   90   66  109   73   49   90  111  123   77   53  285  279  294  280  341  343  336  297  326  342  250  206   42  101       23
  7  203   86  129  138   75   56   81   52  254  299   34  315   32   69   48   63   59   37   23   51  118  120  308   65       60
  8   71   76   79   83  245   86   57   71  268  316  209  223   77  121  318  135  205   25  148   94  149   15  116  147      102
  9   71   44  130  163  105  135   67   70  212  261  108   67  218  285  135  110  130  194  157   90  108   81  101  102      117
 10  103   78  110  100   93   99   61   84  171  193  226  253  330  236  220  159  124  137  151  177  160  115  117   95      135
 11   90   84   79   93   87   85   80   83  203  216  238  221  344  341   69  345  269  246  201  342  227  104  112  117      104
 12   75   62   86   45  108   88   49   22   63  221  175  202  207  217  240  219  225  149  176  266  160  140  285  115      150
 13  292  111  133  122  105  156  110  106  204  202  190  285  299   42   74  227  166  203  177  156  151  276  293  187      170
 14  274  249   37  103   83  263  276  301  274  114  220  219  229  316  316   34  167  290  291  305  201   48   72  133      273
 15   37  106  103  115  104  102   94   83   44   73  292   60  224  162  223  205  202  247  189  178  148   87  104   90      123
 16   87   83   86   74   82   75  169  155  197  209  213  223  230  233  196  230  223  219  216  203  192   72   84   67      167
 17   84   86  200  196  185  181  197  203  204  200  185  201  176  217  247  242  240  346  309  338  325  331  340  326      228
 18  299  285  235   59  167   81  238  247   74  113  150  341  344  310  322  325   55  346   21   53  160  181   98   70       22
 19  103   95   88   88  105   32   83   44   44   58  205  200  200  251  251  224  236  254  233  206  160  117  112   63      136
 20   94  111  103   75  114   46   71  216  165  159  200  232  205  221  240  220  224  207  181  204  171  115   90   85      160
 21   98   90   50  126   94   96   49   43  244  139  195  183  202  200  245  253  246  207  207  161   81  124  139  172      157
 22   33  113  137  145  181  185  146  108  146  180  154  201  203  213  193  176  178  178  163  153  118  175  190  181      164
 23  170  170  168  169  180  153  127  156  173  206  213  212  201  224  205  168  222  215  222  201   86  102  101   98      175
 24   90   93   85   83  100   68   73  126  192  215  236  229  197  212  229  245  239  247  236  206   55   72  105   72      154
 25   65  109   66   71  122   70   91   63  110  242   84  117  105  215  204  213  243  220  213  192   74   77  126   74      119
 26   91   91   75   87  115   72   83   68   72  227  258  185  336  264  211  193  236  243  232  213   76   73   71   86      122
 27   85   71   48   79   87   76  322  278  274   48  315  332   28   66  296  310  319  339  316  241   80   85  121  195       16
 28  257  335   71    6  123   88   74  314  282  221  279  288  252  313  335   24  269   29    4  324  123  290   45  128      336
 29   72   49  103   72  105   77   91  237  287  279  298   45   11  267  322  317   32  319  304  267  212   65   78   94       16
 30   78   80   87   97   78   88   86   85   48   49  194  244  295  283  265  263  137   99  133  153  114   99   66  108       99
 31   77   78   86  102   82   92  186  181  188  208  232  198  187  222  219  224  213  231  239  222  179  281  187   88      185

MEAN  88   83  100   99   99   91   88   92  200  203  224  236  263  253  259  244  220  269  223  177  137  102   94  102      158

                          TOTAL NUMBER OF OBSERVATIONS = 744

NOTE: **** = MISSING DATA
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DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
MRI STATION = 056 PERIOD(8/01/78 TO 8/31/78)

HOUR

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	143	154	198	145	93	195	154	77	73	123	101	107	88	131	145	99	82	129	127	164	170	162	146	123	130
2	155	145	133	128	150	149	140	138	308	338	333	340	320	306	303	342	333	308	310	112	143	155	233	132	172
3	166	180	89	123	128	126	124	101	336	337	339	323	256	324	333	324	306	299	323	338	92	107	100	156	33
4	144	155	123	120	127	117	123	125	80	318	320	311	290	311	319	324	323	327	60	80	114	149	196	137	98
5	158	118	95	144	156	101	92	84	83	49	61	290	322	306	281	301	307	72	35	128	119	136	141	116	95
6	104	100	137	128	132	161	160	111	92	338	325	296	289	279	313	338	308	315	290	317	191	189	128	108	170
7	192	153	140	171	175	***	***	103	316	304	***	***	***	***	***	***	***	***	***	***	***	***	***	***	170
8	***	***	***	***	***	***	***	***	***	***	72	94	95	***	***	***	***	***	***	***	***	***	***	***	87
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	182	74	175	***	***	***	***	***	***	***	***	***	***	***	***	149
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
17	***	***	***	***	***	***	***	***	***	***	163	186	160	166	210	214	195	***	***	***	***	***	***	***	185
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
21	***	***	***	***	***	***	***	***	***	***	***	***	***	215	185	201	230	232	228	169	130	123	121	123	178
22	130	131	121	102	101	114	158	116	113	196	142	128	174	142	143	138	121	92	119	109	114	110	96	85	120
23	84	122	112	135	135	132	149	139	148	164	182	192	196	181	200	207	161	181	220	182	159	156	152	143	159
24	143	167	131	122	132	133	107	118	99	125	190	163	154	140	139	178	209	202	212	157	120	133	140	123	146
25	116	156	143	151	152	133	124	123	89	113	213	111	109	183	193	182	208	221	288	149	150	139	168	157	152
26	150	157	146	162	165	141	115	87	79	264	217	173	175	164	281	***	***	***	***	***	***	***	***	***	159
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
28	***	***	***	***	***	***	***	***	328	320	310	101	298	305	305	294	308	318	49	168	224	169	171	144	290
29	140	160	170	148	175	165	171	85	331	334	325	324	331	311	304	320	308	345	304	197	140	152	163	146	218
30	144	153	153	132	166	134	140	85	105	327	334	314	323	304	290	***	***	63	157	143	141	135	120	125	129
31	119	129	126	77	117	148	138	142	128	197	188	221	180	185	210	200	200	***	***	***	***	***	***	***	159
MEAN	139	145	133	132	140	138	135	108	71	338	295	194	231	234	252	254	261	300	281	147	141	143	146	130	169

TOTAL NUMBER OF OBSERVATIONS = 366

NOTE: **** = MISSING DATA

TEMPERATURE
DEG. C

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
2	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
3	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
4	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
5	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
6	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
7	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	( )
8	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	27	27	27	28	27	25	23	21	20	19	( )	28
9	19	18	16	16	13	13	14	18	23	25	26	27	27	28	29	28	27	27	26	23	20	18	17	16	22	29
10	16	16	16	16	16	16	17	20	23	26	26	26	26	26	26	26	26	24	24	23	20	17	16	14	21	26
11	13	13	12	12	12	13	14	18	22	23	26	26	25	25	23	24	26	24	25	24	22	21	19	16	20	26
12	15	15	14	15	16	15	16	18	20	23	24	25	26	26	25	24	25	25	22	21	21	19	17	17	20	26
13	16	14	14	14	13	13	13	15	18	21	21	19	17	17	19	21	22	22	22	19	16	13	13	12	17	22
14	12	11	11	11	12	11	11	12	12	9	10	11	12	13	14	15	15	15	13	9	8	7	6	4	11	15
15	4	3	3	3	2	2	3	7	11	14	16	17	18	19	21	22	22	21	20	16	13	11	9	9	12	22
16	9	8	8	8	8	8	12	17	20	21	22	23	23	24	24	24	24	24	23	20	16	14	13	12	17	24
17	11	10	9	8	11	11	13	18	20	21	22	22	23	23	24	24	23	19	17	14	13	12	11	9	16	24
18	8	7	4	4	3	3	6	6	7	8	11	13	13	14	16	16	17	17	16	12	9	7	7	5	9	17
19	4	4	3	2	2	2	3	8	13	17	20	22	22	23	23	23	23	23	21	17	14	13	11	9	13	23
20	9	10	10	10	10	9	8	13	17	19	21	22	23	23	24	24	23	23	21	19	16	15	13	13	17	24
21	13	13	13	13	12	12	13	17	21	23	23	23	24	24	24	25	24	24	23	22	20	18	18	16	19	25
22	17	17	17	17	18	18	17	16	17	18	18	19	22	22	19	21	21	22	21	19	18	19	16	18	18	22
23	18	16	13	13	13	13	14	18	21	22	22	23	23	23	24	24	24	24	23	19	16	13	12	11	18	24
24	11	10	10	9	10	10	11	15	20	22	23	23	24	24	24	25	25	24	24	21	17	14	14	13	18	25
25	12	11	12	12	11	11	12	14	16	19	21	22	23	23	24	24	24	24	23	18	16	14	13	13	17	24
26	11	12	12	11	10	9	11	14	19	22	23	24	24	24	25	25	25	24	22	19	16	14	13	11	18	25
27	10	8	8	7	7	7	8	10	15	19	22	23	24	24	24	24	24	24	22	18	14	12	10	9	16	24
28	8	7	6	6	6	5	7	10	14	16	18	20	21	22	23	23	23	23	22	18	14	12	10	9	14	23
29	8	8	7	7	7	6	7	10	12	17	21	22	23	24	24	24	23	23	21	18	14	12	11	9	15	24
30	9	8	8	7	7	6	7	10	16	19	22	23	24	24	24	24	23	22	20	16	14	13	13	13	16	24
31	12	12	13	14	13	13	14	18	21	22	22	22	23	23	24	24	24	23	22	21	19	19	18	17	19	24
AV	12	11	11	10	10	10	11	14	17	19	21	22	22	23	23	23	23	23	22	19	16	14	13	12	17	
PK	19	18	17	17	18	18	17	20	23	26	26	27	27	28	29	28	27	28	27	25	23	21	20	19		29

TEMPERATURE @10M
DEG. C

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	16	16	15	13	14	14	13	16	18	19	22	24	23	22	17	20	21	20	18	17	16	16	16	14	18	24
2	15	15	13	14	13	12	13	15	16	19	22	25	26	27	27	27	27	27	26	24	23	23	22	19	21	27
3	16	13	12	11	9	9	10	12	13	16	19	22	23	23	24	24	24	24	23	22	19	17	17	16	18	24
4	15	15	13	13	12	11	12	14	17	19	22	23	23	24	25	25	25	25	24	23	20	17	18	17	19	25
5	16	15	15	15	13	13	13	17	21	23	25	26	27	27	27	28	28	28	27	24	23	21	20	19	21	28
6	18	17	16	17	16	15	14	18	23	26	27	28	29	29	28	28	27	27	26	24	22	20	18	18	22	29
7	17	16	15	15	14	14	14	17	19	21	23	24	26	26	26	27	27	27	26	24	22	20	20	18	21	27
8	19	19	18	18	16	16	16	19	22	24	26	26	27	28	27	26	25	26	26	24	22	22	21	19	22	28
9	20	19	18	17	17	17	17	19	22	23	24	27	25	26	27	26	26	25	23	22	20	19	18	18	22	27
10	17	17	17	18	17	17	19	20	21	24	25	26	26	27	27	26	25	24	24	22	20	19	18	18	22	27
11	18	18	18	18	18	18	18	19	23	23	26	27	28	28	24	26	27	26	26	24	22	21	18	18	22	28
12	18	18	18	17	18	18	18	19	21	23	24	25	25	27	26	26	26	24	22	21	19	19	18	17	21	27
13	16	13	13	12	12	11	11	14	18	19	19	19	16	14	17	21	21	20	21	19	15	13	10	9	16	21
14	9	8	8	8	9	9	8	9	9	8	8	8	9	11	12	12	12	13	11	7	6	5	3	4	9	13
15	2	2	3	3	3	2	2	4	8	11	13	15	17	18	19	21	21	21	19	18	16	14	13	13	12	21
16	13	13	14	12	13	14	15	17	19	20	21	22	23	24	24	25	26	24	23	22	20	19	19	19	19	26
17	19	18	18	18	17	17	17	18	19	21	22	22	23	24	25	24	24	21	16	13	11	9	8	7	18	25
18	6	5	4	3	3	3	3	2	3	4	7	9	11	12	13	14	15	15	15	13	12	10	8	8	8	15
19	8	7	7	6	7	6	7	9	14	18	19	21	22	22	22	23	23	23	22	19	18	16	15	15	16	23
20	15	13	13	14	15	15	16	18	16	18	21	22	23	23	24	23	23	22	21	19	19	18	16	16	18	24
21	16	16	16	16	15	13	13	17	21	22	23	23	24	24	24	25	25	24	24	21	19	18	18	18	20	25
22	18	17	17	17	16	16	14	14	16	16	16	18	21	21	18	20	20	21	19	18	18	18	18	17	18	21
23	17	17	16	16	16	14	16	18	19	21	22	23	23	24	24	25	25	24	23	20	19	17	16	17	19	25
24	16	17	16	18	17	17	16	18	21	22	23	24	24	25	26	26	26	25	24	21	19	18	18	19	21	26
25	18	18	18	17	16	17	17	18	19	21	20	22	24	25	24	24	25	24	22	19	18	18	18	18	20	25
26	17	16	16	16	15	15	16	18	21	23	24	24	24	25	26	26	25	24	23	21	18	18	18	17	20	26
27	16	16	14	14	15	14	13	14	18	21	22	24	24	24	24	24	25	24	23	21	18	17	17	17	19	25
28	16	15	14	13	10	9	9	12	13	16	18	20	21	22	23	23	23	22	21	19	18	17	14	13	17	23
29	13	12	11	11	11	11	11	13	15	18	20	22	23	24	24	24	24	23	22	20	18	16	16	16	17	24
30	14	14	13	12	11	11	12	14	18	21	22	23	24	25	25	24	24	22	21	19	18	18	17	17	18	25
31	18	18	18	17	17	18	18	19	21	22	22	23	23	24	25	25	25	24	23	21	21	20	20	19	21	25
AV	15	14	14	14	13	13	13	16	17	19	21	22	23	23	23	24	24	23	22	20	18	17	16	16	18	
PK	20	19	18	18	18	18	19	20	23	26	27	28	29	29	28	28	28	28	27	24	23	23	22	19		29

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 042 PERIOD(8/01/78 TO 8/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	13	12	13	12	11	11	10	13	18	19	21	25	26	25	17	19	22	19	19	18	14	12	12	11	16
2	11	10	8	8	6	6	8	12	16	20	24	27	27	28	29	28	29	29	28	26	22	24	21	19	19
3	16	13	11	10	8	6	7	12	13	16	19	22	24	24	26	26	26	26	24	22	19	18	14	12	17
4	9	8	7	7	7	6	7	12	17	20	22	23	25	26	26	26	26	26	26	23	19	17	13	11	17
5	8	7	7	6	6	6	7	13	19	26	26	27	27	28	29	29	29	29	28	25	22	16	14	12	19
6	11	11	9	8	7	7	8	16	21	26	28	29	29	29	28	29	28	28	28	25	22	21	17	17	20
7	16	13	12	9	9	8	9	13	18	21	24	25	26	27	28	27	28	27	27	24	20	18	14	12	19
8	11	9	9	9	9	8	9	16	22	24	28	29	27	29	27	27	28	27	26	23	22	19	19	19	20
9	18	18	18	16	16	12	13	19	23	25	28	29	27	27	28	27	26	25	24	20	19	16	16	14	21
10	13	13	13	14	13	12	14	18	22	24	26	27	26	28	27	27	25	24	24	21	19	15	13	13	20
11	11	11	10	10	10	11	12	19	23	24	28	28	27	25	23	26	26	25	24	23	20	18	16	14	19
12	13	12	12	12	13	13	13	16	19	24	25	26	27	27	24	24	25	24	19	19	18	18	15	14	19
13	12	12	11	11	9	9	10	13	18	19	20	16	13	16	18	21	19	20	20	18	12	11	8	8	14
14	7	7	7	7	7	7	6	9	7	6	6	7	9	9	11	12	12	12	7	4	3	2	1	0	7
15	0	-1	-1	-1	-1	-1	0	5	8	11	14	17	19	20	21	22	21	21	20	17	14	9	9	8	10
16	7	7	7	6	6	6	14	18	20	21	21	22	23	24	24	25	25	24	23	21	19	13	11	10	17
17	9	8	15	16	15	14	16	19	19	21	22	23	23	25	25	26	25	17	14	11	9	8	7	7	16
18	6	4	2	1	0	-1	0	0	2	5	9	9	11	12	13	14	14	15	14	11	9	6	3	3	7
19	1	1	1	0	0	0	2	9	14	19	21	23	23	23	24	24	23	23	22	19	16	11	10	7	13
20	7	9	8	8	13	12	12	16	14	19	21	24	25	25	25	25	24	23	21	19	19	14	13	12	17
21	11	11	11	11	11	10	11	16	22	23	24	25	25	25	25	26	25	25	23	20	19	18	18	18	19
22	18	15	15	15	15	16	13	12	15	16	16	19	21	20	18	20	20	22	20	18	18	16	18	17	17
23	16	15	15	14	14	13	13	18	20	20	22	23	23	25	26	26	25	25	23	19	15	13	12	10	19
24	9	9	9	8	8	8	9	18	20	24	24	25	26	27	26	27	26	26	24	20	16	14	14	11	18
25	11	11	11	9	10	8	10	12	16	22	19	23	24	26	25	26	26	26	23	21	16	13	13	11	17
26	10	10	9	9	10	10	9	14	20	24	24	26	26	26	26	26	26	24	23	20	16	13	11	9	18
27	8	7	6	6	6	6	7	12	18	22	23	24	24	26	26	26	26	25	23	20	14	12	10	10	16
28	9	8	6	3	3	3	6	9	13	13	17	18	18	19	21	21	22	21	20	17	15	13	9	7	13
29	4	4	4	3	2	2	2	8	12	15	18	21	22	23	23	23	22	22	21	18	15	12	7	7	13
30	6	6	5	4	2	2	2	8	15	19	22	23	23	24	24	23	23	18	18	17	14	13	12	11	14
31	10	9	10	12	11	12	15	16	18	21	20	20	23	23	23	24	24	23	22	19	18	18	18	16	18
MEAN	10	9	9	8	8	8	9	13	17	20	21	23	23	24	24	24	24	23	22	19	17	14	13	11	16

TOTAL NUMBER OF OBSERVATIONS = 744

NOTE **** = MISSING DATA

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 056 PERIOD(8/01/78 TO 8/31/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	12	11	13	11	9	9	10	14	18	21	20	25	27	27	19	19	21	22	22	18	14	11	9	8	16
2	7	6	6	5	4	3	6	11	13	18	24	26	28	29	30	30	29	31	28	24	22	19	20	17	18
3	13	11	10	6	5	4	6	11	13	15	18	21	24	26	26	27	27	26	26	23	18	14	11	8	16
4	7	6	5	4	3	3	3	9	17	19	21	24	25	25	26	26	27	26	26	24	18	14	10	9	16
5	6	4	3	3	3	3	4	10	17	24	28	27	28	29	30	31	30	29	29	24	19	15	12	9	17
6	9	7	7	6	5	4	6	12	19	26	29	23	30	31	29	29	29	29	27	26	21	17	16	16	19
7	14	12	11	12	9	***	***	16	20	23	***	***	***	***	***	***	***	***	***	***	***	***	***	***	15
8	***	***	***	***	***	***	***	***	***	***	30	32	30	***	***	***	***	***	***	***	***	***	***	***	31
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	27	30	29	***	***	***	***	***	***	***	***	***	***	***	***	29
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
17	***	***	***	***	***	***	***	***	***	***	24	26	26	28	28	28	28	***	***	***	***	***	***	***	27
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
21	***	***	***	***	***	***	***	***	***	***	***	***	***	28	28	29	27	27	25	22	18	18	16	15	23
22	16	16	16	16	16	16	14	13	14	17	17	21	23	24	21	22	23	24	21	18	16	14	13	15	18
23	16	13	10	9	10	10	9	14	21	23	25	26	26	28	27	28	27	26	23	13	14	11	9	8	18
24	7	6	6	5	5	6	6	13	19	22	27	27	28	28	29	29	28	27	23	19	14	13	9	9	17
25	8	8	9	7	7	7	7	11	15	20	22	24	25	26	27	28	28	26	23	18	14	12	11	9	16
26	7	7	7	7	6	5	6	12	18	24	26	27	28	27	27	***	***	***	***	***	***	***	***	***	16
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
28	***	***	***	***	***	***	***	***	12	14	18	22	22	23	24	24	23	23	22	18	12	9	7	5	17
29	3	3	2	2	1	1	1	7	12	15	20	23	24	26	26	27	25	24	23	18	13	11	8	6	13
30	5	4	3	3	1	0	2	7	14	20	23	24	25	26	27	***	***	21	19	14	11	9	9	9	13
31	7	8	9	9	9	10	12	16	21	24	24	23	26	27	28	28	27	***	***	***	***	***	***	***	18
MEAN	9	8	8	7	6	6	7	12	16	21	24	25	26	27	27	27	27	26	24	20	16	13	11	10	17

TOTAL NUMBER OF OBSERVATIONS = 366

NOTE: **** = MISSING DATA

DELTA TEMPERATURE 60-10 M
DEG. C*100

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	-50	-64	-89	25	33	297	56	42	56	64	183	172	203	234	234	93	297
2	236	250	172	128	217	292	181	22	-50	-72	-81	-92	-78	8	-53	-83	-42	-14	-19	47	100	75	47	164	57	292
3	131	-6	0	22	42	25	-22	-58	-69	-64	-100	-108	-106	-111	-89	-89	-95	-75	-56	6	72	120	192	178	-11	192
4	225	183	278	181	122	125	61	-36	-50	-61	-92	-114	-106	-117	-92	-114	-114	-81	-19	33	83	161	100	192	31	278
5	278	278	267	281	306	261	147	22	-47	-75	-100	-114	-125	-106	-95	-89	-100	-72	-11	100	178	189	208	222	75	306
6	284	292	153	150	364	167	220	17	-42	-69	-106	-114	-131	-106	-100	-95	-53	-25	-28	-11	39	183	186	125	54	364
7	197	214	206	136	181	117	61	-50	-75	-75	-106	-122	-139	-117	-122	-128	-97	-78	-33	25	120	150	78	164	21	214
8	164	120	111	95	189	306	267	31	-56	-69	-86	-106	-111	-100	-75	-50	-56	-61	-19	14	69	50	114	170	38	306
9	58	28	75	61	14	86	64	-53	-61	-75	-81	-120	-44	-81	-89	-72	-72	-56	-28	128	114	128	228	220	16	228
10	256	192	147	195	153	86	11	-44	-69	-64	-89	-56	-72	-25	-17	-100	-44	-33	-17	28	322	306	211	228	63	322
11	278	339	306	222	189	234	189	-28	-56	-56	-75	-111	-106	-89	-72	-75	-83	-44	-28	-22	25	44	50	22	44	339
12	33	61	161	222	122	106	72	11	-28	-56	-75	-78	-61	-44	-28	-67	-33	-72	-50	-17	-11	-11	44	33	10	222
13	33	6	44	72	28	44	95	11	-28	-50	-72	-50	-39	-39	-67	-61	-72	-61	-39	11	-17	72	-6	-17	-8	95
14	11	-28	-28	-22	-89	61	222	100	-44	-17	-17	-56	-25	-61	-56	-44	-67	-44	-25	-39	-22	25	139	161	2	222
15	133	267	189	206	139	139	234	167	-39	-39	-50	-78	-75	-75	-95	-83	-75	-50	-44	22	33	139	133	117	51	267
16	183	267	211	195	161	167	100	-33	-67	-67	-83	-17	-33	-50	-17	-39	-28	-17	0	22	100	117	125	100	54	267
17	172	106	22	39	89	78	17	28	0	17	0	-44	-39	-17	-25	-39	-6	-44	-28	-22	-17	0	6	-11	12	172
18	0	6	22	72	106	50	25	-22	-50	-56	-72	-83	-78	-78	-89	-100	-72	-72	-33	25	22	72	133	145	-6	145
19	239	284	339	311	269	334	217	11	-33	-67	-83	-75	-89	-72	-61	33	-56	-44	-28	56	217	195	161	172	94	339
20	228	278	183	67	56	39	6	-22	89	-33	-61	-89	-72	-11	-17	-72	-72	-44	-28	-22	25	67	111	178	33	278
21	156	195	150	145	145	175	161	-22	-53	-86	-86	-81	-64	-44	-42	-6	-72	-61	-22	-19	8	19	17	14	22	195
22	-19	-11	-14	-19	-25	-28	11	3	-31	-56	-56	-50	-58	-42	-56	-78	-67	-61	-28	8	28	22	-8	28	-25	28
23	22	25	33	50	72	111	0	-50	-56	-50	-56	-28	-78	-72	-61	-72	-72	-44	-17	178	261	272	272	256	37	272
24	328	195	225	175	228	125	128	-25	-50	-78	-78	-75	-95	-89	-67	-75	-39	-39	-22	156	272	217	56	111	62	328
25	78	145	172	145	172	178	161	106	-22	-56	-39	-106	-78	-106	-75	-78	-33	-61	-61	189	245	128	161	125	54	245
26	200	133	175	145	200	128	125	-44	-56	-89	-83	-83	-75	-89	-78	-61	-56	-39	-17	145	289	295	311	234	67	311
27	225	183	225	156	156	156	239	83	-56	-72	-89	-100	-100	-78	-67	-56	-61	-61	25	111	161	172	56	25	52	239
28	72	67	72	83	150	111	61	-61	-75	-72	-95	-75	-95	-89	-111	-100	-78	-56	17	25	28	50	183	183	8	183
29	156	175	200	228	189	189	211	28	-56	-83	-72	-122	-83	-78	-83	-75	-72	-50	-11	89	89	239	211	117	56	239
30	200	228	200	183	228	189	156	39	-33	-56	-78	-78	-61	-50	-67	-61	-39	11	50	117	125	234	234	122	75	234
31	183	167	125	133	178	44	6	-28	-50	-78	6	-95	-75	-28	6	-17	17	-28	-6	28	122	67	100	56	35	183
AV	158	155	147	135	146	137	114	3	-44	-61	-72	-84	-76	-65	-53	-64	-57	-46	-18	51	105	129	132	131	37	
PK	328	339	339	311	364	334	267	167	89	17	6	-17	25	33	297	56	42	56	64	189	322	306	311	256		364

REL HUMIDITY
PERCENT

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	68	65	67	72	73	68	88	81	69	53	52	40	33	40	59	73	58	59	59	62	65	65	66	72	63	88
2	73	72	75	76	76	78	80	75	60	56	45	35	21	19	15	14	14	13	13	15	18	26	25	26	43	80
3	36	45	73	80	86	91	94	89	73	64	54	35	23	23	18	16	14	14	15	18	23	27	35	40	45	94
4	45	47	51	54	55	57	61	62	52	37	31	25	18	18	17	17	17	15	15	16	19	22	25	27	33	62
5	32	34	35	35	35	38	40	40	35	24	19	16	16	15	13	12	13	13	13	14	17	19	24	25	24	40
6	27	29	34	35	35	37	37	42	34	25	20	19	17	16	16	19	19	20	20	22	27	34	43	46	28	46
7	47	56	61	63	66	67	71	68	55	44	37	28	26	21	19	18	20	18	18	20	23	28	34	37	39	71
8	39	42	42	44	46	50	56	57	48	44	31	26	22	24	22	23	25	26	25	27	29	34	37	40	36	57
9	43	44	44	47	52	55	58	58	50	41	37	31	28	28	26	23	21	26	30	33	36	40	45	48	39	58
10	50	52	52	52	52	53	54	55	47	47	40	38	34	30	29	27	29	28	32	35	38	43	46	49	42	55
11	50	51	52	52	53	53	54	54	54	44	37	32	30	30	30	36	34	30	32	34	46	51	56	61	44	61
12	60	61	61	62	62	61	62	61	58	53	43	42	40	38	34	38	36	36	38	48	50	53	58	60	51	62
13	61	89	90	93	94	93	93	88	68	44	42	41	45	81	70	55	35	40	36	37	45	70	80	89	66	94
14	90	91	90	90	90	83	89	89	76	72	79	76	76	60	57	51	54	48	43	65	78	81	89	89	75	91
15	89	89	88	86	84	85	82	82	65	49	30	24	23	16	14	15	14	12	7	11	17	19	16	22	43	89
16	28	33	38	34	36	32	31	30	28	24	22	22	21	18	15	14	12	9	9	9	9	10	11	13	21	38
17	14	14	15	13	12	12	13	16	19	19	18	16	15	13	13	10	10	9	10	22	34	39	44	50	19	50
18	60	69	76	81	82	86	87	87	84	85	64	50	41	31	26	25	23	22	23	24	28	34	39	46	53	87
19	50	51	53	55	59	59	59	57	46	37	25	18	16	15	15	15	13	14	14	14	15	17	21	24	32	59
20	25	26	27	31	45	54	56	57	51	47	59	45	36	28	27	23	24	25	27	32	34	35	38	44	37	59
21	45	47	50	52	52	53	57	61	56	46	38	35	29	29	24	25	22	20	21	23	31	38	42	44	39	61
22	46	46	47	48	51	57	61	67	85	77	66	59	59	44	37	38	52	42	41	37	42	45	45	45	52	85
23	46	48	48	48	48	50	50	56	54	45	34	27	27	24	22	20	19	18	16	16	17	20	23	25	33	56
24	26	27	29	31	31	32	32	37	37	38	30	25	19	21	21	20	17	16	15	15	15	17	23	25	25	38
25	27	28	28	28	28	28	29	30	31	34	30	34	29	26	22	21	20	20	17	18	24	28	30	31	27	34
26	33	34	38	41	42	41	44	44	42	36	23	19	16	16	16	15	14	14	15	16	17	20	21	21	27	44
27	20	20	19	19	19	20	20	20	22	20	15	12	11	11	11	11	11	11	10	10	11	14	17	20	16	22
28	25	28	33	37	41	45	51	55	54	49	45	38	33	29	24	23	22	21	20	20	23	27	32	38	34	55
29	43	44	47	49	51	54	57	58	53	44	38	32	28	23	21	21	20	20	20	20	22	27	29	33	36	58
30	34	35	38	41	42	47	48	50	48	40	33	26	23	22	18	18	17	21	22	33	33	34	35	38	33	50
31	38	38	38	37	36	38	38	36	34	34	33	30	31	28	24	23	23	22	22	23	24	27	29	29	31	38
AV	44	47	50	51	53	54	57	57	51	44	38	32	29	27	25	24	23	23	23	25	29	34	37	41	39	
PK	90	91	90	93	94	93	94	89	85	85	79	76	76	81	70	73	58	59	59	65	78	81	89	89		94

BAROMETRIC PRESS
MILLIBARS

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	789	789	789	789	789	789	789	789	789	789	789	788	788	788	788	787	787	788	788	788	788	788	789	789	788	789
2	789	789	789	789	789	790	790	790	791	791	791	791	790	791	791	791	790	790	790	791	791	792	792	792	790	792
3	792	793	793	793	794	794	794	795	795	795	795	795	795	794	794	793	793	793	793	793	793	793	794	794	794	795
4	794	794	794	794	794	794	795	795	795	795	795	795	795	795	794	794	794	793	793	793	794	794	794	795	794	795
5	795	795	795	795	795	795	796	796	796	796	796	796	795	795	795	794	794	794	794	794	794	794	795	795	795	796
6	795	795	795	795	795	795	796	796	796	796	796	796	795	795	794	794	794	794	794	794	794	794	795	795	795	796
7	795	795	795	795	795	796	796	796	796	796	796	796	795	795	794	794	793	793	793	793	793	793	793	793	795	796
8	794	794	794	794	794	795	795	795	795	795	795	794	794	793	793	793	793	792	792	792	793	793	793	793	794	795
9	793	793	794	794	794	794	794	794	794	794	794	793	793	792	792	791	791	791	791	791	791	792	792	792	793	794
10	791	791	791	791	791	791	791	792	792	792	792	791	791	790	789	789	789	789	789	789	789	789	789	789	790	792
11	789	789	789	789	789	790	790	790	790	790	790	790	790	790	790	790	789	789	789	789	790	790	790	790	790	790
12	790	790	790	790	790	790	790	790	791	791	791	791	791	790	790	790	789	789	789	789	790	790	790	790	790	791
13	791	791	791	791	791	791	791	791	791	791	790	790	791	790	789	789	788	788	788	788	788	789	790	790	790	791
14	790	789	790	789	788	788	789	790	790	790	791	791	791	791	791	791	791	791	791	792	793	793	794	794	791	794
15	794	794	794	794	794	794	794	794	795	795	794	794	793	793	792	792	791	791	791	791	791	791	791	791	793	795
16	791	790	790	790	789	789	789	789	789	789	789	789	789	788	787	787	786	786	786	786	786	786	786	786	788	791
17	786	786	786	787	787	787	787	787	787	787	787	787	787	786	786	786	786	786	787	789	790	791	791	791	787	791
18	792	792	792	792	792	793	793	794	794	795	795	795	795	794	794	794	794	794	794	794	794	794	794	794	794	795
19	794	794	794	794	794	794	794	794	794	794	794	793	793	792	792	791	776	776	777	777	777	778	778	778	788	794
20	779	780	780	780	780	780	780	781	781	781	782	781	781	781	781	781	781	781	784	784	784	784	785	785	782	785
21	786	786	787	787	787	787	787	(RF)	(RF)	(RF)	787	787	787	786	786	785	785	785	785	785	785	785	785	785	786	787
22	785	785	785	785	785	785	785	785	785	785	785	784	784	(CA)	777	777	777	776	776	776	776	776	776	776	781	785
23	776	776	776	777	777	777	778	778	778	(MT)	(MT)	(MT)	787	787	786	786	786	786	786	786	786	786	787	787	782	787
24	787	787	787	787	787	788	788	788	788	788	788	788	788	788	787	787	787	787	787	787	787	787	787	787	787	788
25	787	787	787	787	787	787	787	787	788	789	789	788	787	787	786	786	786	786	785	785	785	785	786	786	787	789
26	786	786	786	786	786	786	786	786	787	787	787	786	786	785	785	785	784	784	784	784	784	784	784	785	785	787
27	785	785	785	785	785	785	785	786	786	786	786	786	786	786	785	785	785	785	785	785	786	787	787	788	786	788
28	788	788	788	788	788	788	789	789	789	789	789	789	788	788	788	788	787	787	787	787	787	787	787	787	788	789
29	787	787	787	787	787	787	788	788	788	788	788	788	787	787	786	786	786	786	786	786	786	786	786	786	787	788
30	786	786	786	786	786	786	787	787	787	787	787	787	786	786	786	786	785	785	785	785	785	785	785	785	786	787
31	785	785	785	785	785	785	785	785	785	785	786	785	785	784	784	783	783	783	783	783	783	783	783	784	784	786
AV	789	789	789	789	789	789	790	790	790	791	790	790	790	790	789	789	788	788	788	788	788	788	789	789	789	
PK	795	795	795	795	795	796	796	796	796	796	796	796	795	795	795	794	794	794	794	794	794	794	795	795		796

SOLAR RADIATION
LANGLEY

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1	0	0	0	0	0	0	11	31	39	46	70	84	15	12	13	14	11	2	11	0	0	0	0	0	359	84
2	0	0	0	0	0	3	13	30	45	58	67	78	84	82	75	63	34	9	3	0	0	0	0	0	644	84
3	0	0	0	0	0	3	13	27	48	60	72	79	81	78	69	57	42	25	9	0	0	0	0	0	663	81
4	0	0	0	0	0	3	14	30	47	61	72	80	81	77	69	56	41	24	8	0	0	0	0	0	663	81
5	0	0	0	0	0	4	15	31	47	61	72	79	80	76	68	55	39	22	7	0	0	0	0	0	656	80
6	0	0	0	0	0	4	13	29	45	59	71	77	81	20	24	43	28	15	5	0	0	0	0	0	514	81
7	0	0	0	0	0	3	14	29	45	60	71	79	80	75	68	56	39	21	7	0	0	0	0	0	647	80
8	0	0	0	0	0	1	13	31	50	60	73	84	22	82	13	33	25	21	2	0	0	0	0	0	510	84
9	0	0	0	0	0	2	13	28	44	58	72	84	23	56	75	42	8	15	9	0	0	0	0	0	529	84
10	0	0	0	0	0	4	15	23	47	58	75	54	18	80	17	59	8	4	2	0	0	0	0	0	464	80
11	0	0	0	0	0	1	15	23	37	43	75	73	84	16	33	41	27	6	1	0	0	0	0	0	475	84
12	0	0	0	0	0	2	9	8	40	59	49	61	59	62	34	40	31	20	1	0	0	0	0	0	475	62
13	0	0	0	0	0	2	11	26	45	41	42	59	18	58	37	40	37	22	6	0	0	0	0	0	444	59
14	0	0	0	0	0	3	11	20	11	7	13	16	39	27	16	10	44	16	1	0	0	0	0	0	234	44
15	0	0	0	0	0	6	16	31	46	61	72	78	80	76	67	53	38	21	6	0	0	0	0	0	651	80
16	0	0	0	0	0	3	14	29	46	60	71	77	79	74	65	53	37	19	5	0	0	0	0	0	632	79
17	0	0	0	0	0	3	14	29	46	60	71	77	79	75	66	53	37	3	2	0	0	0	0	0	615	79
18	0	0	0	0	0	0	1	3	11	54	53	58	58	76	66	52	37	19	4	0	0	0	0	0	492	76
19	0	0	0	0	0	3	14	29	46	57	48	82	83	57	49	49	28	14	4	0	0	0	0	0	563	83
20	0	0	0	0	0	1	10	16	16	35	53	67	46	47	35	31	19	6	1	0	0	0	0	0	383	67
21	0	0	0	0	0	1	10	(IM)	(IM)	(IM)	62	52	53	51	53	44	24	16	3	0	0	0	0	0	369	62
22	0	0	0	0	0	0	1	5	10	14	15	52	67	11	18	25	25	17	5	0	0	0	0	0	265	67
23	0	0	0	0	0	2	10	24	37	62	75	90	65	75	66	52	36	17	4	0	0	0	0	0	615	90
24	0	0	0	0	0	1	7	27	13	72	72	78	85	81	73	53	36	18	4	0	0	0	0	0	620	85
25	0	0	0	0	0	1	3	7	13	38	18	78	90	78	72	57	38	19	1	0	0	0	0	0	513	90
26	0	0	0	0	0	1	12	29	45	60	74	81	88	77	68	52	30	7	3	0	0	0	0	0	627	88
27	0	0	0	0	0	1	12	30	46	62	74	79	75	23	19	40	35	14	2	0	0	0	0	0	512	79
28	0	0	0	0	0	1	17	24	47	60	69	74	78	75	64	48	37	16	2	0	0	0	0	0	612	78
29	0	0	0	0	0	1	10	27	43	58	70	77	81	81	70	37	21	9	2	0	0	0	0	0	587	81
30	0	0	0	0	0	1	9	26	44	58	69	76	87	83	39	10	5	6	3	0	0	0	0	0	516	87
31	0	0	0	0	0	1	3	13	30	22	36	60	81	74	69	54	30	3	2	0	0	0	0	0	478	81
TL	0	0	0	0	0	62	343	715	1129	1564	1896	2223	2040	1915	1570	1372	927	446	125	0	0	0	0	0	6327	
PK	0	0	0	0	0	6	17	31	50	72	75	90	90	83	75	63	44	25	11	0	0	0	0	0		90

PRECIPITATION
CM *100

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1					10	3									8						25	(TR)	(TR)	(TR)	46	25
2	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3																	(TR)	3	3
3	(TR)	(TR)	(TR)	(TR)	(TR)	3														(TR)	(TR)	(TR)	3	(TR)	5	3
4	(TR)	(TR)	3	(TR)	(TR)	(TR)	3											(TR)	(TR)	(TR)	(TR)	(TR)	3		8	3
5																(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	3		5	3
6														(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	3	(TR)	(TR)	(TR)	5	3
7	3	(TR)	(TR)	(TR)	3																				5	3
8																										
9																										
10																										
11																										
12																								10	10	10
13	3											(TR)								(TR)	10	(TR)	(TR)	(TR)	13	10
14	3	(TR)	3	(TR)	(TR)	(TR)	3	10	5					(TR)	8	3	3								36	10
15							5	13	3	5			(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3						28	13
16							3	3	3	3		(TR)	(TR)	3											13	3
17							3	3																	5	3
18										13		(TR)	(TR)	3											15	13
19							10	(TR)	3	3	(TR)	(TR)	(TR)	3											18	10
20							(TR)		8	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	5								13	8
21							3	3	3	3	(TR)														10	3
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										
31																										
TL	8		5		13	5	30	30	23	25				8	15	3	10		5		38		8	10	236	
PK	3		3		10	3	10	13	8	13				3	8	3	5		3		25		3	10		25

PRECIPITATION
CM *100

CB-TRACT
TRAILER 23
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1						33								15											48	33
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9															(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)		
10	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(	)
11	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(	)
12	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(	)
13	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(	)
14	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)																		
15																										
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										
31																										
TL						33								15											49	
PK						33								15											(	)

Evaporation Data

C-b Tract
Trailer 23
Aug. 1978
Occidental Oil Shale, Inc.

Sample Period	Total Evaporation (cm)	Precipitation (cm)	Total Wind (km)	Max. Temp. (c)	Min. Temp. (c)
8/1-8/2	.52	.48	158.2	26	9
3- 4	1.08		133.0	31	12
5- 7	3.10		170.3	33	9
8- 9	1.33		99.3	34	11
10- 11	1.52		164.2	34	2
12- 14	2.52	(RF)	371.8	13	8
15- 16	.75	(RF)	199.4	27	0
17- 18	1.85		394.5	30	2
19- 21	1.85		265.3	29	2
22- 25	3.60		663.4	30	5
26- 28	2.63		253.1	33	5
29- 30	1.73		112.7	32	5
8/31-9/1	1.33		255.0	32	11

MIXING·HEIGHT
METERS

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	100	180	30	30	30	30	30	30	30	30	42	180
2	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
3	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
4	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
5	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
6	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
7	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
8	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
9	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
10	30	30	30	30	30	30	30	30	(RF)	(MT)	(MT)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
11	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
12	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
13	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
14	30	30	30	30	30	30	30	30	(OS)	130	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	37	130
15	30	30	30	30	30	30	30	30	30	140	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	37	140
16	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
17	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
18	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
19	30	30	30	30	30	30	30	30	30	60	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	32	60
20	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30
21	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
22	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
23	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
24	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
25	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
26	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
27	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
28	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
29	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
31	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
AV	30	30	30	30	30	30	30	30	30	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	30	30	30	30	30	31	
PK	30	30	30	30	30	30	30	30	30	140	30	( )	( )	( )	100	180	30	30	30	30	30	30	30	30		180

INVERSION HEIGHT
METERS

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	410	440	530	570	580	620	480	350	260	(NV)	(NV)	(NV)	(NV)	(NV)	300	400	250	330	310	310	370	430	470	510	417	620
2	510	520	490	470	510	470	420	370	350	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	250	310	290	270	381	520
3	450	590	740	760	650	620	620	480	340	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	180	350	400	350	474	760
4	340	350	340	310	350	350	270	200	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	150	260	250	270	259	350
5	300	330	320	370	350	370	300	190	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	160	190	220	250	266	370
6	280	340	340	350	330	350	360	180	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	280	330	290	295	360
7	480	510	400	320	360	420	370	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	210	310	340	330	328	510
8	280	280	310	250	380	380	350	280	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	120	160	190	310	270	261	380
9	260	210	200	190	210	270	250	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	180	180	260	300	206	300
10	310	310	300	240	180	250	280	150	(RF)	(MT)	(MT)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	170	270	340	360	400	274	400
11	390	370	380	420	470	440	310	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	150	180	250	360	300	325	470
12	270	320	290	320	270	250	240	230	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	330	240	390	450	350	293	450
13	250	250	250	420	350	530	420	290	160	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	150	350	280	430	440	326	530
14	200	140	380	590	470	400	370	170	(NV)	330	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	250	450	460	410	334	590
15	580	650	600	540	400	430	500	400	320	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	180	360	450	500	510	459	650
16	470	420	430	500	460	360	270	140	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	230	270	310	330	333	500
17	280	260	250	180	190	260	370	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	120	130	140	180	202	370
18	350	440	390	350	330	370	300	270	280	160	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	180	360	410	380	390	331	440
19	390	410	450	490	400	470	450	470	180	110	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	120	240	340	330	360	347	490
20	350	310	350	650	780	760	600	330	360	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	220	370	330	290	438	780
21	380	470	380	310	500	640	590	470	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	210	210	260	290	290	368	640
22	240	290	280	260	200	90	230	350	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	280	350	400	370	290	274	400
23	290	310	290	330	270	360	340	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	340	380	390	460	320	460
24	440	430	420	450	430	420	430	240	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	220	360	430	320	300	376	450
25	320	360	330	320	320	330	310	290	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	220	440	490	400	330	329	490
26	320	360	310	320	390	410	320	220	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	170	330	360	360	360	325	410
27	340	330	340	300	290	330	320	270	190	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	230	290	350	340	288	350
28	450	490	410	380	330	340	280	250	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	190	350	430	440	390	327	490
29	320	330	340	380	390	360	340	220	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	60	200	310	270	320	370	301	390
30	370	360	350	370	380	370	370	320	220	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	180	290	330	430	510	550	360	550
31	430	400	460	480	450	450	420	290	160	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	150	250	290	340	290	347	480
AV	356	374	376	393	386	402	370	265	211	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	168	261	329	355	347	328	
PK	580	650	740	760	780	760	620	480	360	330	250	( )	( )	( )	300	400	250	330	310	330	440	490	510	550		780

STABILITY CLASS 0=STB 1=UNST
@50 METERS

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
7	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	(RF)	(MT)	(MT)	1	1	1	1	1	1	1	1	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
PV	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0

STABILITY CLASS 0=STB 1=UNST
@200 METERS

CB-TRACT
TRAILER 20
AUG 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
4	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
5	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
6	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
7	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
8	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
9	0	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
10	0	0	0	0	1	0	0	1	(RF)	(MT)	(MT)	1	1	1	1	1	1	1	1	1	0	0	0	0	1
11	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
12	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
14	0	1	1	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
16	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
17	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
19	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
21	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
22	0	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
23	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
26	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
27	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
28	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
29	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
PV	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1

```
C-B PIBAL SOUNDING

SOUNDING DATE  8- 2-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


               THEODOLITE #1              THEODOLITE #2

  TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0           0.0        0.0           42.5       -0.1       0.0
  0.5         293.2       24.6           38.0        0.5      14.3
  1.0         285.2       30.1           34.3        3.6      17.5
  1.5         282.2       44.6           35.1        6.6      18.0
  2.0         286.5       55.5           35.1       11.2      18.6
  2.5         295.2       53.9           32.8       16.1      19.2
  3.0         296.3       51.7           29.8       19.2      19.8
  3.5         289.5       54.6           29.1       20.1      20.4
  4.0         285.6       56.8           28.3       21.2      20.4
  4.5         284.5       58.3           27.3       23.6      19.9
  5.0         283.0       59.9           26.9       26.8      19.4
  5.5         281.2       62.0           27.1       29.4      18.9
  6.0         283.2       64.8           27.6       30.8      18.4
  6.5         290.0       67.2           27.9       32.7      17.9
  7.0         299.3       69.5           28.4       33.5      17.4
  7.5         314.1       71.7           29.5       33.2      16.9
  8.0         329.0       73.4           30.0       34.7      16.4
  8.5         348.8       74.9           32.8       34.9      15.9
  9.0           6.5       74.6           35.2       35.2      15.4
  9.5          20.4       72.6           37.9       35.4      15.0
 10.0          28.8       70.6           37.9       35.6      14.5
 10.5          35.4       67.7           39.5       35.6      14.6
 11.0          38.2       65.4           40.4       35.4      13.5
 11.5          39.6       62.7           40.6       35.3      13.0
 12.0          40.3       61.5           40.9       35.1      12.3


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME      RHO      ERROR

    1     117.0      4.4
    2      94.6      4.6
    3      88.6      4.7
    4      21.0      5.0
    5     127.0      5.5
    6     166.4      5.9
    7      33.0      5.9
    8      68.3      6.0
    9      88.4      6.2
   10      50.8      6.5
   11      34.0      6.7
   12      47.3      6.9
   13       8.6      7.4
   14       9.1      7.8
   16        91.0        8.9
   17        88.5        9.3
   18        71.8        9.8
   19        22.6       10.5
   20       129.9       11.1
   21       108.5       11.9
   22        86.9       12.5
   23       110.9       13.4
   24       103.0       13.7


          HEIGHT  DIRECTION   SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

            147.    106.       11.3  14.3
            378.     89.        4.7  17.5
            583.    267.        0.7  18.0
            921.    138.        5.4  18.6
           1279.    127.        8.9  19.2
           1531.     92.        4.5  19.3
           1633.     24.        3.3  20.4
           1746.     61.        2.1  20.4
           1953.     81.        2.4  19.9
           2210.     53.        1.7  19.4
           2431.    279.        0.9  18.9
           2611.    220.        3.5  18.4
           2889.    214.        5.7  17.9
           3107.    226.        8.3  17.4
           3262.    228.        9.6  16.9
           3649.    243.       10.4  16.4
           3855.    255.       11.9  15.9
           4078.    252.       12.3  15.4
           4327.    243.       11.8  15.0
           4591.    238.       12.6  14.5
           4877.    239.       13.0  14.6
           5072.    230.       13.2  13.5
           5373.    227.       10.9  13.0


          HEIGHT  DIRECTION   SPEED  TEMP
          METERS   DEGREES    M/SEC  DEG C

             45.    106.        3.4  14.3
            115.     89.        1.4  17.5
            178.    267.        0.2  18.0
            281.    138.        1.6  18.6
            390.    127.        2.7  19.2
            467.     92.        1.4  19.8
            498.     24.        1.0  20.4
            532.     61.        0.6  20.4
            595.     81.        0.7  19.9
            674.     53.        0.5  19.4
            741.    279.        0.3  18.9
            796.    220.        1.1  18.4
            880.    214.        1.7  17.9
            947.    226.        2.5  17.4
            994.    228.        2.9  16.9
           1112.    243.        3.2  16.4
           1175.    255.        3.6  15.9
           1243.    252.        3.7  15.4
           1319.    243.        3.6  15.0
           1399.    238.        3.8  14.5
           1486.    239.        4.0  14.6
           1546.    230.        4.0  13.5
           1638.    227.        3.3  13.0
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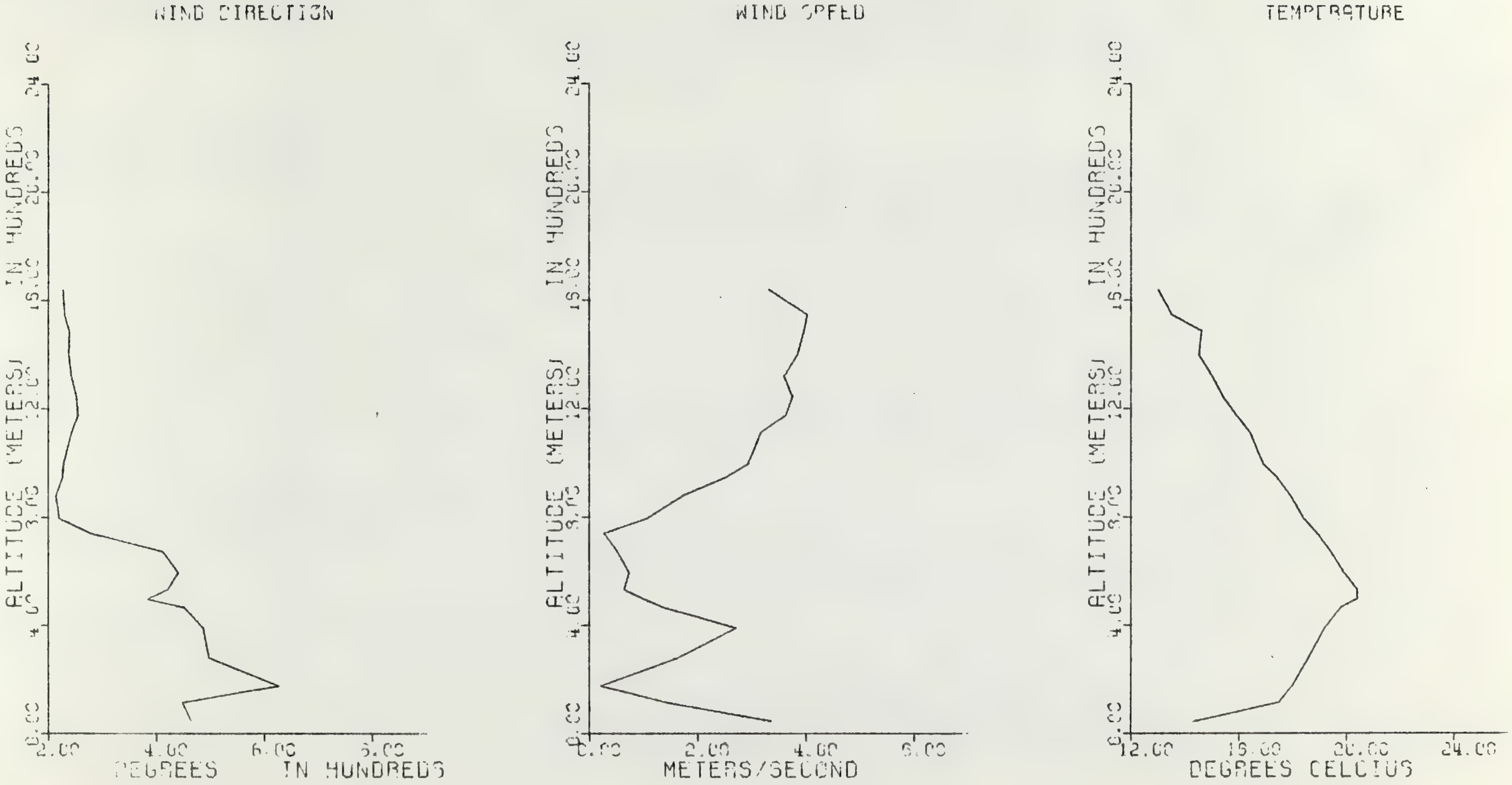
C-B PIBAL SOUNDING

TIME 645 DATE 8/2/79

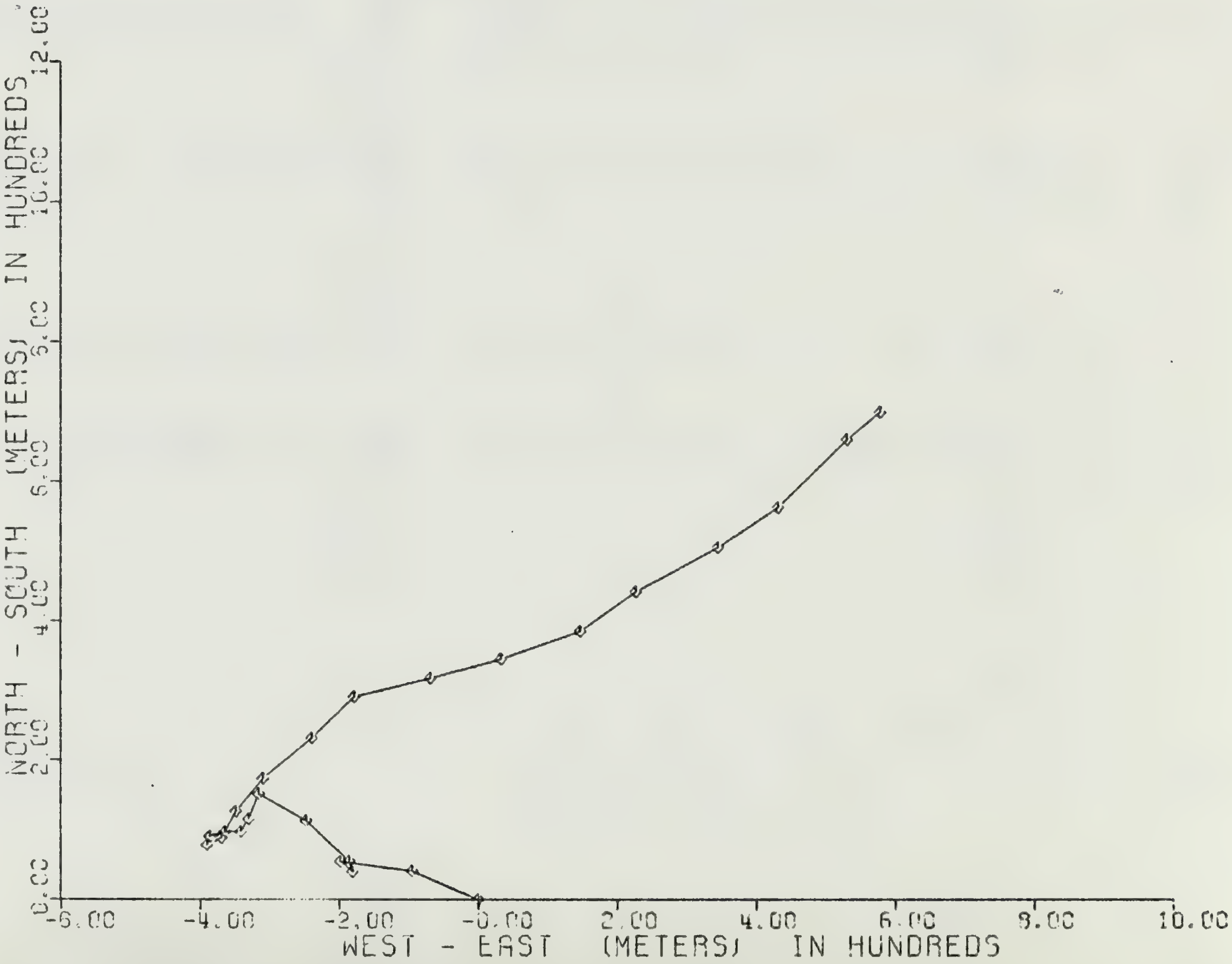


C-B PIBAL SOUNDING

TIME 645 DATE 8/2/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8- 2-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           42.5       -0.1          0.0
   0.5          163.2       35.5           44.4        2.3         27.4
   1.0          158.1       33.6           50.1        5.9         26.7
   1.5          148.1       34.7           55.0        8.9         26.0
   2.0          136.8       37.7           57.1       10.8         25.3
   2.5          132.3       40.1           58.0       12.4         24.6
   3.0          126.9       40.2           59.8       14.0         23.9
   3.5          118.7       42.7           62.0       16.9         23.2
   4.0          110.7       44.1           62.5       19.3         22.5
   4.5          107.9       46.6           61.6       21.8         21.9
   5.0          101.1       44.8           61.7       22.0         21.0
   5.5           97.1       43.8           61.9       22.4         20.2
   6.0           95.0       44.5           61.8       23.3         19.4
   6.5           91.3       46.8           61.7       26.4         18.3
   7.0           87.2       45.5           62.0       27.2         17.1
   7.5           86.2       44.4           63.4       27.9         15.9
   8.0           83.5       42.3           63.7       27.5         14.6
   8.5           82.7       40.0           64.6       27.2         13.4
   9.0           83.3       38.8           66.5       27.6         12.2
   9.5           83.7       37.7           67.9       27.4         10.9
  10.0           83.1       36.5           68.4       27.2          9.7
  10.5           82.2       35.5           68.8       26.9          8.5
  11.0           82.7       35.8           69.7       27.8          7.3
  11.5           82.4       35.5           70.0       27.9          6.2
  12.0           82.4       35.3           70.4       28.0          5.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        51.9        4.3
     2        28.1        4.7
     3        10.2        5.2
     4        11.4        5.7
     5        13.6        6.0
     6         6.5        6.4
     7        48.2        7.3
     8        22.5        8.2
     9        82.1        8.6
    10        96.2        9.3
    11       100.4       10.0
    12        99.2       10.4
    13       138.0       11.6
    14       148.0       13.0
    15       124.5       14.3
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        16      110.3         15.7
        17      160.6         17.1
        18      162.3         19.0
        19      121.1         20.3
        20      149.5         21.8
        21      118.7         23.4
        22      161.2         25.0
        23      163.5         26.2
        24      161.0         27.1


             HEIGHT  DIRECTION   SPEED  TEMP
              FEET    DEGREES   FT/SEC DEG C

               159.     339.      11.4  27.4
               459.     325.      14.0  26.7
               727.     294.      10.7  26.0
               944.     271.       7.2  25.3
              1113.     276.       6.7  24.6
              1306.     272.      11.3  23.9
              1725.     259.      13.7  23.2
              2111.     243.       8.8  22.5
              2402.     238.       9.4  21.9
              2600.     244.      13.3  21.0
              2796.     243.       8.8  20.2
              3001.     241.      10.0  19.4
              3661.     244.      18.3  18.3
              4133.     252.      21.7  17.1
              4595.     252.      23.0  15.9
              4913.     251.      25.8  14.6
              5231.     262.      29.4  13.4
              5788.     267.      28.2  12.2
              6113.     262.      25.2  10.9
              6445.     255.      27.8   9.7
              6823.     260.      26.0   8.5
              7416.     263.      21.4   7.3
              7760.     259.      18.0   6.2


             HEIGHT  DIRECTION   SPEED  TEMP
             METERS   DEGREES    M/SEC  DEG C

                48.     339.       3.5  27.4
               140.     325.       4.3  26.7
               222.     294.       3.3  26.0
               288.     271.       2.2  25.3
               339.     276.       2.0  24.6
               398.     272.       3.4  23.9
               526.     259.       4.2  23.2
               643.     243.       2.7  22.5
               732.     238.       2.9  21.9
               792.     244.       4.1  21.0
               852.     243.       2.7  20.2
               915.     241.       3.0  19.4
              1116.     244.       5.6  18.3
              1260.     252.       6.6  17.1
              1401.     252.       7.0  15.9
              1497.     251.       7.9  14.6
              1594.     262.       9.0  13.4
              1764.     267.       8.6  12.2
              1863.     262.       7.7  10.9
              1965.     255.       8.5   9.7
              2080.     260.       7.9   8.5
              2260.     263.       6.5   7.3
              2365.     259.       5.5   6.2
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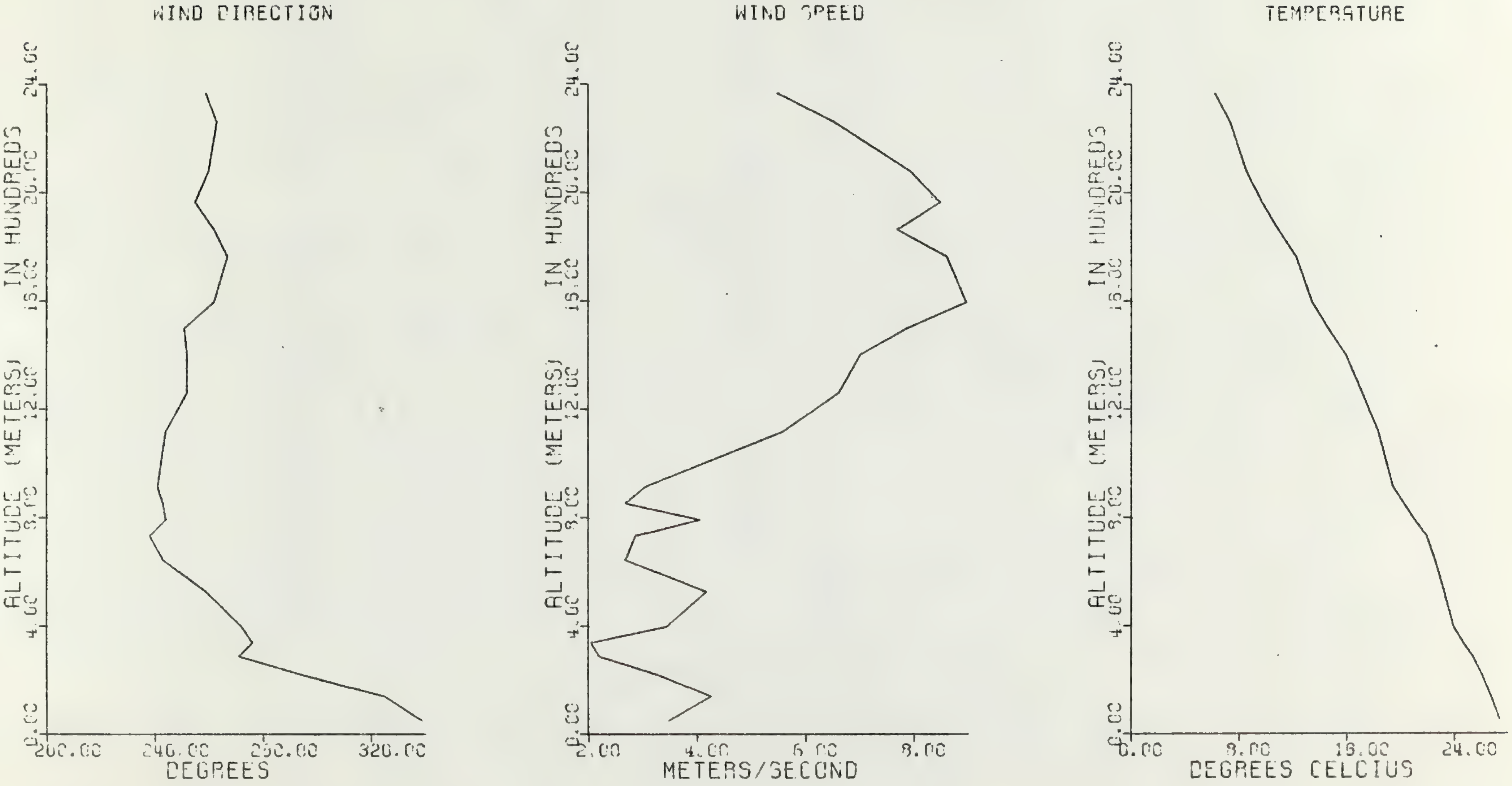
C-B PIBAL SOUNDING

TIME 1330 DATE 8/2/78


WIND DIRECTION

WIND SPEED

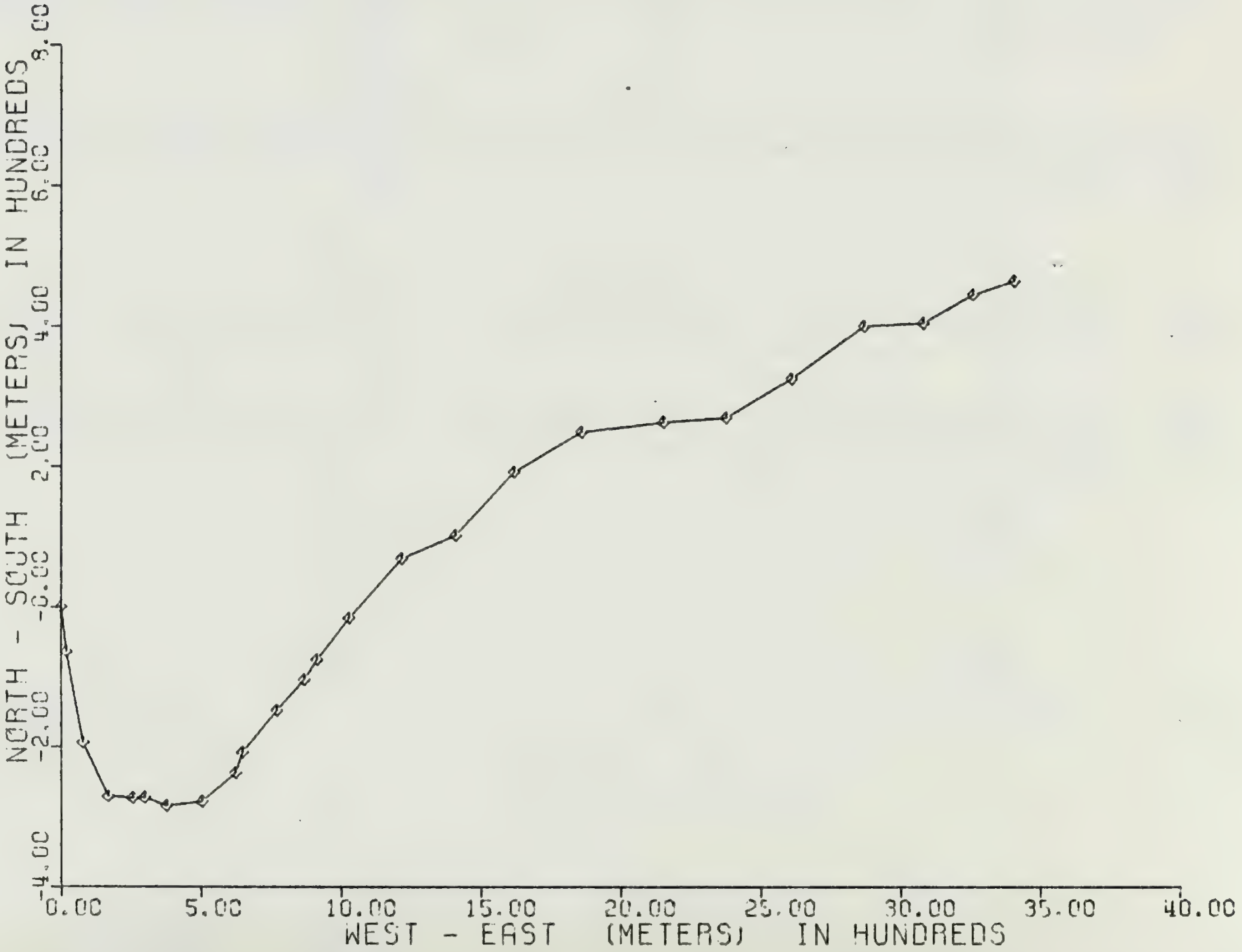
TEMPERATURE

C-B PIBAL SOUNDING

TIME 1330 DATE 8/2/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 0650 DATE: 8/4/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON.

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C-B PIBAL SOUNDING

SOUNDING DATE  8- 4-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                   THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1        0.0
   0.5          200.2       40.0            44.2        5.5       23.0
   1.0          195.0       42.7            49.3       13.6       19.0
   1.5          187.5       45.7            56.0       22.5       17.1
   2.0          179.0       50.0            66.1       33.3       15.2
   2.5          169.7       55.1            72.6       40.8       13.4
   3.0          160.8       57.5            78.1       44.5       11.5
   3.5          156.0       55.0            85.1       48.3        9.6
   4.0          150.5       60.9            87.4       51.0        7.8
   4.5          148.1       60.9            89.3       52.4        5.9
   5.0          148.1       59.8            95.9       53.5        4.4
   5.5          147.3       59.6            98.0       53.8        3.2
   6.0          147.2       58.8           101.5       54.0        2.0
   6.5          147.4       57.6           105.4       53.3        0.8
   7.0          146.7       55.0           109.7       52.0       -0.3
   7.5          146.4       52.8           113.0       50.4       -1.5
   8.0          146.8       50.6           117.5       48.5       -2.7
   8.5          145.7       47.7           121.2       47.2       -2.1
   9.0          146.0       46.6           125.0       45.5       -2.3
   9.5          146.1       44.2           127.3       44.3       -3.3
  10.0          146.2       44.0           129.1       43.1       -4.3
  10.5          146.2       42.8           130.4       42.2       -5.3
  11.0          146.4       41.9           132.3       41.0       -6.4
  11.5          146.6       41.0           133.1       40.1       -7.4
  12.0          146.8       40.0           134.3       39.1       -8.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       58.4        4.4
     2       12.9        4.7
     3        1.2        5.3
     4       61.8        6.6
     5       70.6        8.1
     6      112.3        9.7
     7      173.9       11.4
     8      235.6       13.7
     9      154.0       14.9
    10      229.6       16.9
    11      260.6       17.8
    12      284.3       19.1
    13      400.8       20.2
    14      339.2       21.9
    15      354.0       23.3
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      16      495.6       25.3
      17      198.1       29.2
      18      536.4       32.8
      19      206.0       35.8
      20      638.3       38.4
      21      569.0       40.9
      22      778.0       44.6
      23      809.8       45.9
      24      864.0       48.6


          HEIGHT  DIRECTION   SPEED   TEMP
           FEET    DEGREES   FT/SEC  DEG C

            407.        15.      17.1  23.0
            952.         1.      17.3  19.0
           1533.       344.      18.4  17.1
           2411.       324.      18.0  15.2
           3387.       303.      17.5  13.4
           4272.       312.      21.2  11.5
           5116.       304.      18.5   9.6
           6467.       287.      13.2   7.8
           7119.       321.      18.4   5.9
           8054.       325.      18.4   4.4
           8524.       323.      14.4   3.2
           9106.       328.      18.9   2.0
           9533.       325.      26.7   0.8
          10106.       324.      31.2  -0.3
          10448.       328.      34.8  -1.5
          11018.       325.      53.3  -2.7
          12320.       325.      63.5  -2.1
          13545.       328.      58.4  -2.3
          14297.       328.      49.6  -3.3
          15154.       327.      44.6  -4.3
          15839.       323.      55.0  -5.3
          16928.       330.      46.0  -6.4
          17088.       331.      39.5  -7.4


          HEIGHT  DIRECTION   SPEED   TEMP
          METERS   DEGREES    M/SEC  DEG C

            124.        15.       5.2  23.0
            290.         1.       5.3  19.0
            467.       344.       5.6  17.1
            735.       324.       5.5  15.2
           1032.       303.       5.3  13.4
           1302.       312.       6.5  11.5
           1559.       304.       5.6   9.6
           1971.       287.       4.0   7.8
           2170.       321.       5.6   5.9
           2455.       325.       5.6   4.4
           2598.       323.       4.4   3.2
           2776.       328.       5.8   2.0
           2906.       325.       8.1   0.8
           3080.       324.       9.5  -0.3
           3184.       328.      10.6  -1.5
           3358.       325.      16.2  -2.7
           3755.       325.      19.4  -2.1
           4128.       328.      17.8  -2.3
           4358.       328.      15.1  -3.3
           4619.       327.      13.6  -4.3
           4828.       328.      16.8  -5.3
           5160.       330.      14.0  -6.4
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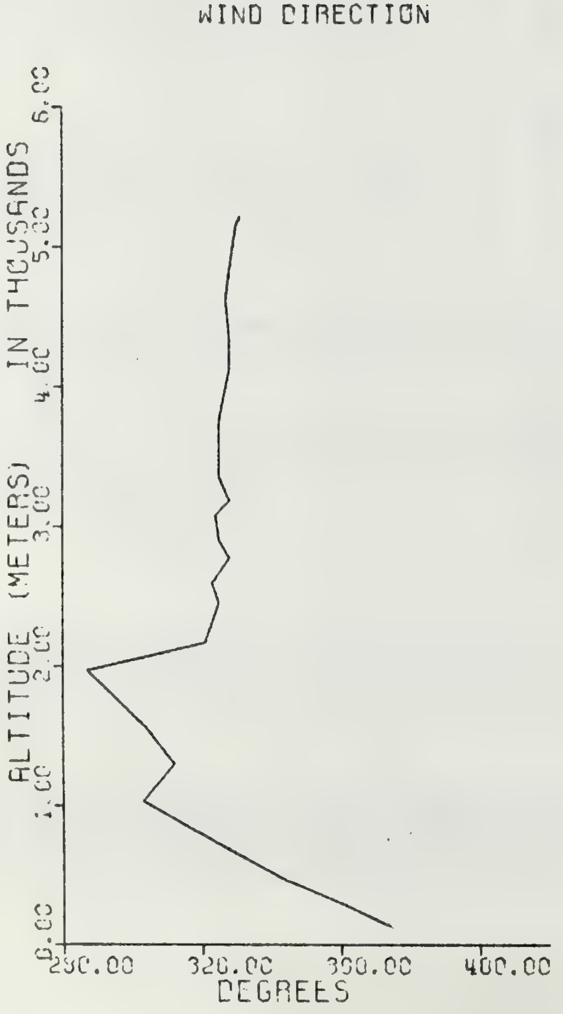
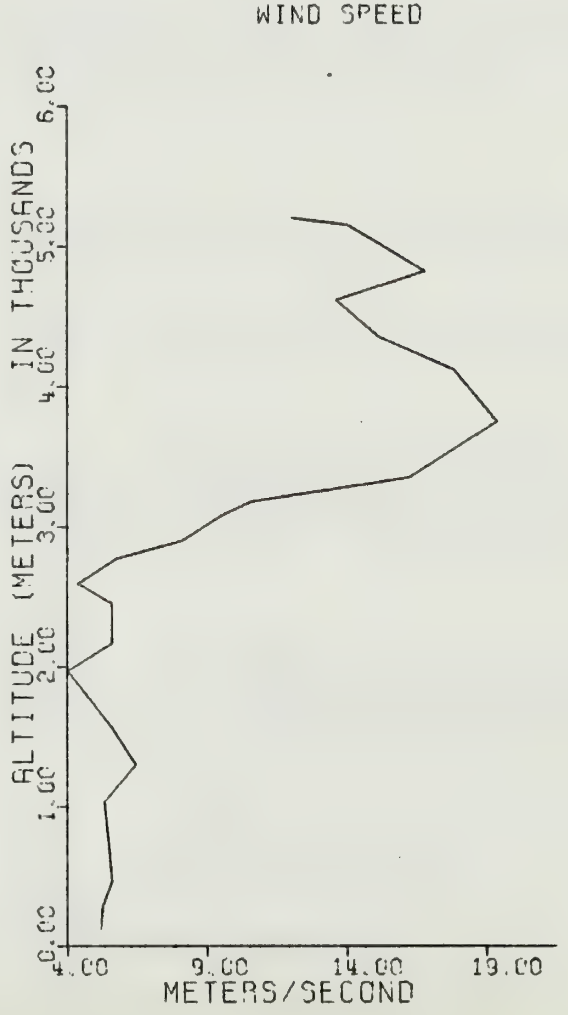
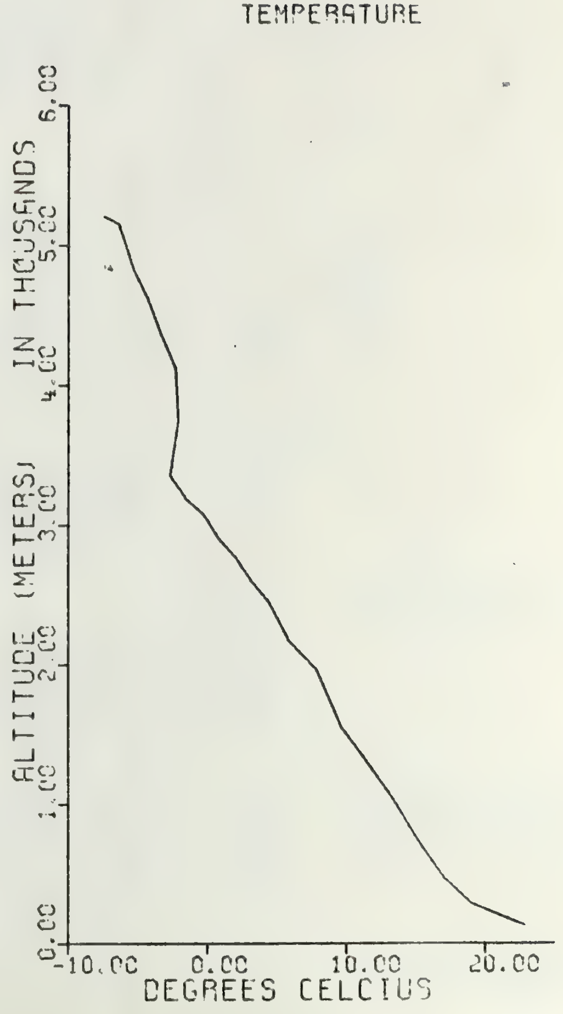
C-B PIBAL SOUNDING

TIME 1330   DATE 8/4/78


WIND DIRECTION


WIND SPEED

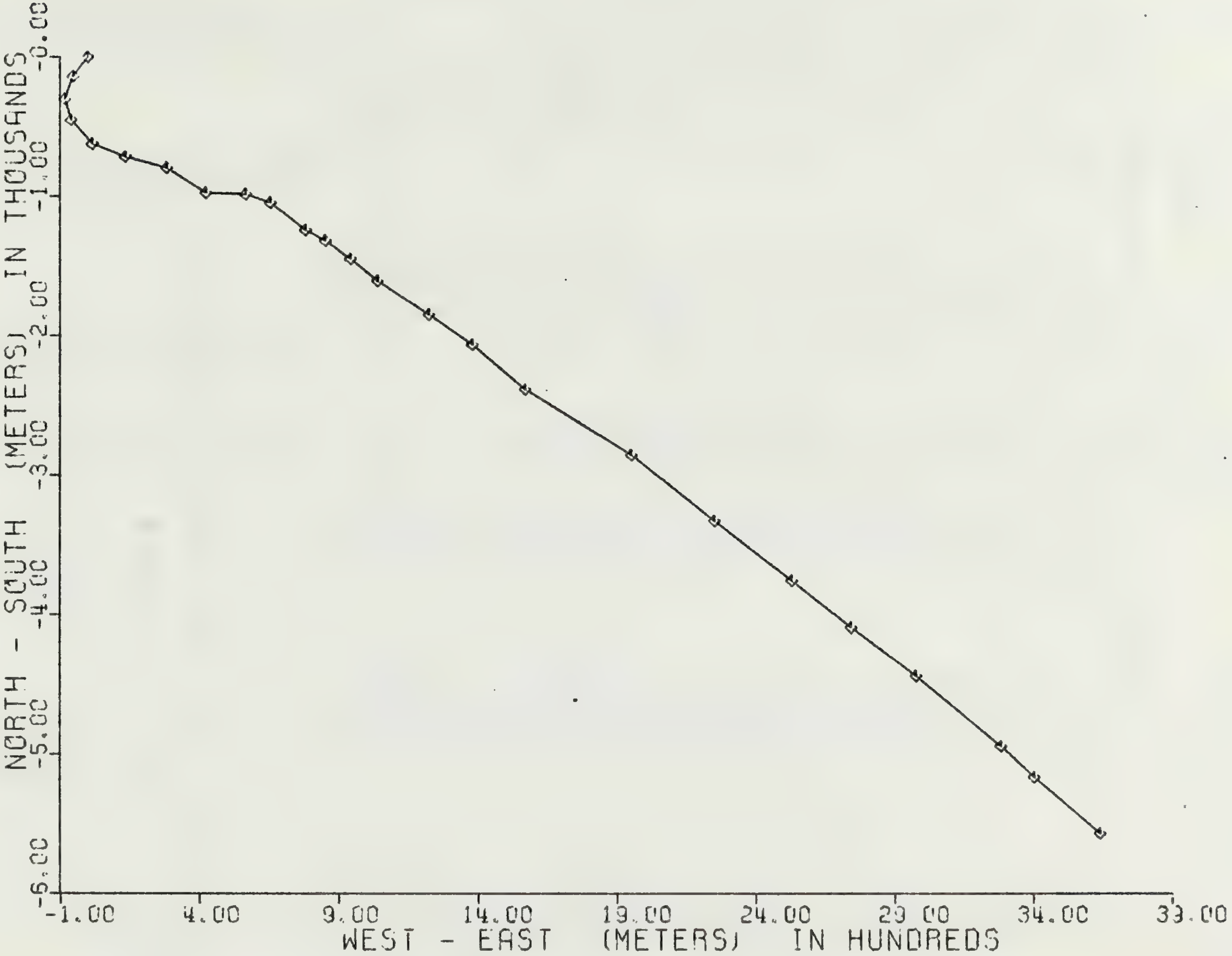

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1330   DATE 8/4/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8- 7-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1                THEODOLITE #2

   TIME       AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0             42.5       -0.1         0.0
   0.5           53.2       74.5             42.5        4.0        14.2
   1.0           44.1       79.8             43.2        7.9        16.0
   1.5           73.2       72.8             43.9       10.6        17.3
   2.0          152.2       74.6             46.0       14.7        18.0
   2.5          160.2       62.8             51.3       19.0        18.7
   3.0          168.9       49.6             61.0       25.1        18.5
   3.5          173.0       45.6             68.2       29.8        18.3
   4.0          175.0       42.2             77.6       34.8        18.1
   4.5          178.1       40.7             89.3       40.0        17.6
   5.0          179.4       39.8             98.9       43.1        17.0
   5.5          180.1       38.6            109.0       44.9        16.4
   6.0          178.8       37.0            118.9       44.2        15.8
   6.5          175.7       35.8            123.0       42.2        15.2
   7.0          172.1       34.9            127.1       40.1        14.6
   7.5          169.6       34.3            131.1       38.0        14.0
   8.0          167.8       33.5            131.6       36.5        13.4
   8.5          166.4       33.8            133.8       35.3        12.7
   9.0          165.4       32.5            135.5       34.4        11.9
   9.5          165.0       31.9            137.4       33.5        11.1
  10.0          164.5       31.4            138.8       33.0        10.3
  10.5          164.4       30.8            140.6       32.3         9.5
  11.0          164.3       30.6            142.5       31.4         8.7
  11.5          164.0       29.5            144.0       30.5         8.0
  12.0          164.7       28.9            145.0       29.7         7.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        17.6        4.6
     2        56.7        5.0
     3        26.9        5.4
     4        33.8        5.4
     5        18.4        5.7
     6        16.5        6.1
     7        17.1        6.5
     8        22.4        7.1
     9       118.3        7.9
    10       168.2        8.6
    11       198.4        9.5
    12       229.9       10.7
    13       216.6       11.7
    14       229.9       13.3
    15       349.9       15.1
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      16      370.7       15.9
      17      583.7       17.4
      18      479.6       18.7
      19      527.8       19.9
      20      512.9       21.2
      21      531.0       22.6
      22      694.7       24.3
      23      624.2       26.1
      24      689.3       26.2


           HEIGHT   DIRECTION   SPEED   TEMP
            FEET     DEGREES   FT/SEC  DEG C

             350.     227.        2.1   14.2
             692.     261.        3.4   16.0
             951.     351.        6.4   17.3
            1234.       0.       13.9   18.0
            1548.     354.       21.6   18.7
            1902.       0.       23.1   18.5
            2183.       2.       19.8   18.3
            2506.       5.       22.4   18.1
            2919.       7.       21.2   17.6
            3259.       4.       19.7   17.0
            3590.     357.       23.0   16.4
            3936.     342.       23.1   15.8
            4179.     329.       25.8   15.2
            4599.     331.       32.1   14.6
            5081.     328.       25.0   14.0
            5189.     327.       21.4   13.4
            5637.     333.       25.8   12.7
            5878.     337.       24.2   11.9
            6153.     339.       23.5   11.1
            6459.     341.       24.7   10.3
            6760.     344.       28.8    9.5
            7160.     342.       33.2    8.7
            7473.     350.       19.9    8.0

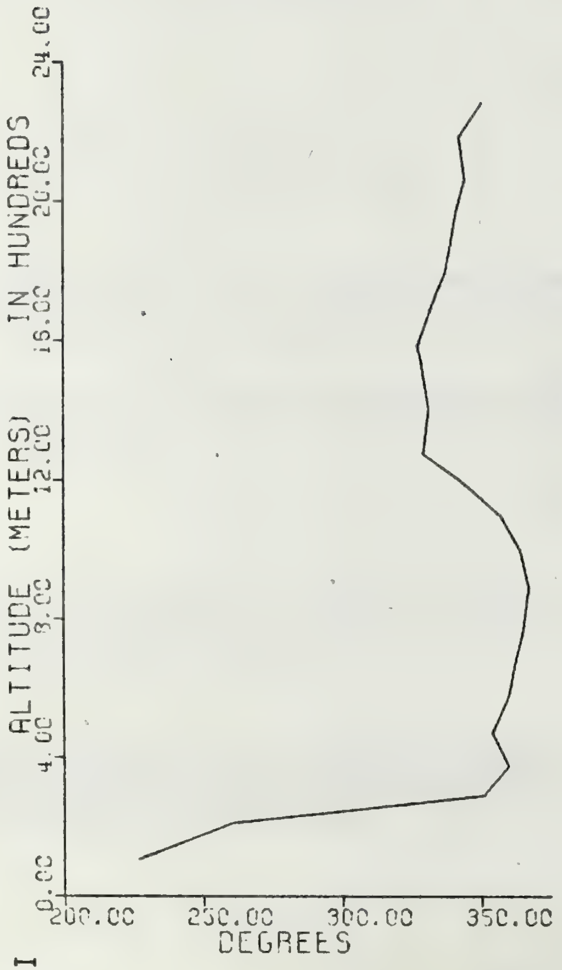

           HEIGHT   DIRECTION   SPEED   TEMP
           METERS    DEGREES    M/SEC  DEG C

             107.     227.        0.6   14.2
             211.     261.        1.0   16.0
             290.     351.        2.0   17.3
             376.       0.        4.2   18.0
             472.     354.        6.6   18.7
             580.       0.        7.0   18.5
             665.       2.        6.0   18.3
             764.       5.        6.8   18.1
             890.       7.        6.5   17.6
             993.       4.        6.0   17.0
            1094.     357.        7.0   16.4
            1200.     342.        7.0   15.8
            1274.     329.        7.9   15.2
            1402.     331.        9.8   14.6
            1549.     328.        7.6   14.0
            1581.     327.        6.5   13.4
            1718.     333.        7.9   12.7
            1792.     337.        7.4   11.9
            1875.     339.        7.2   11.1
            1969.     341.        7.5   10.3
            2061.     344.        8.8    9.5
            2182.     342.       10.1    8.7
            2278.     350.        6.1    8.0
```

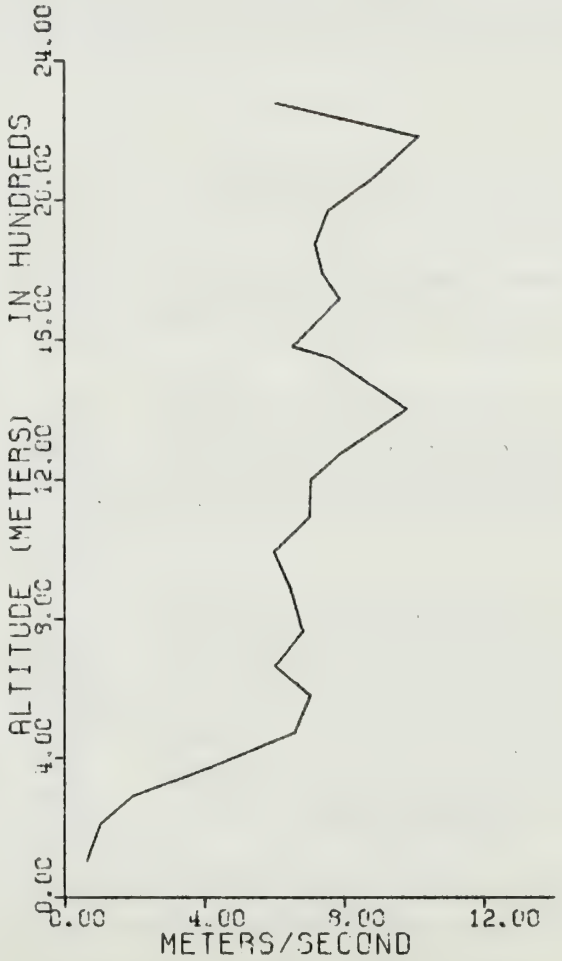
C-B PIBAL SOUNDING

TIME 650 DATE 8/7/78

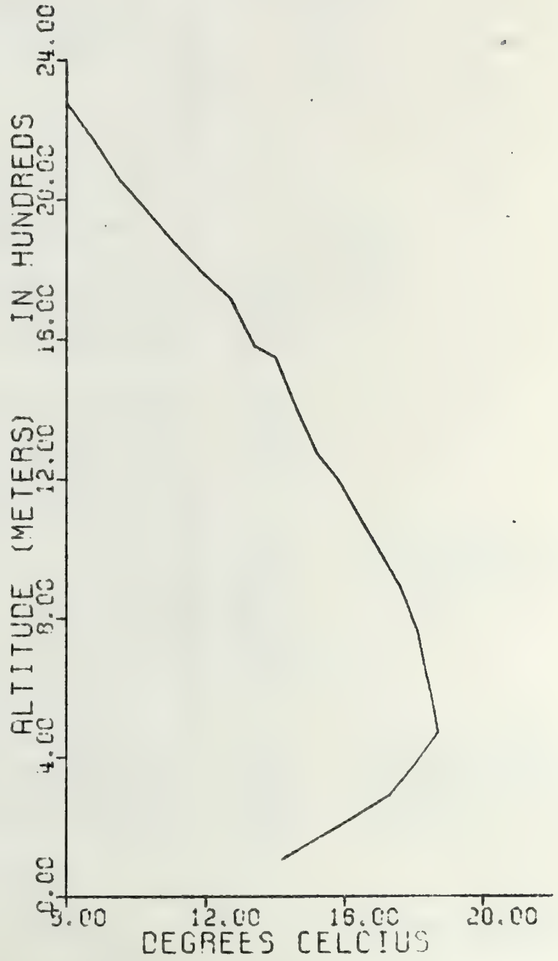
WIND DIRECTION



WIND SPEED



TEMPERATURE

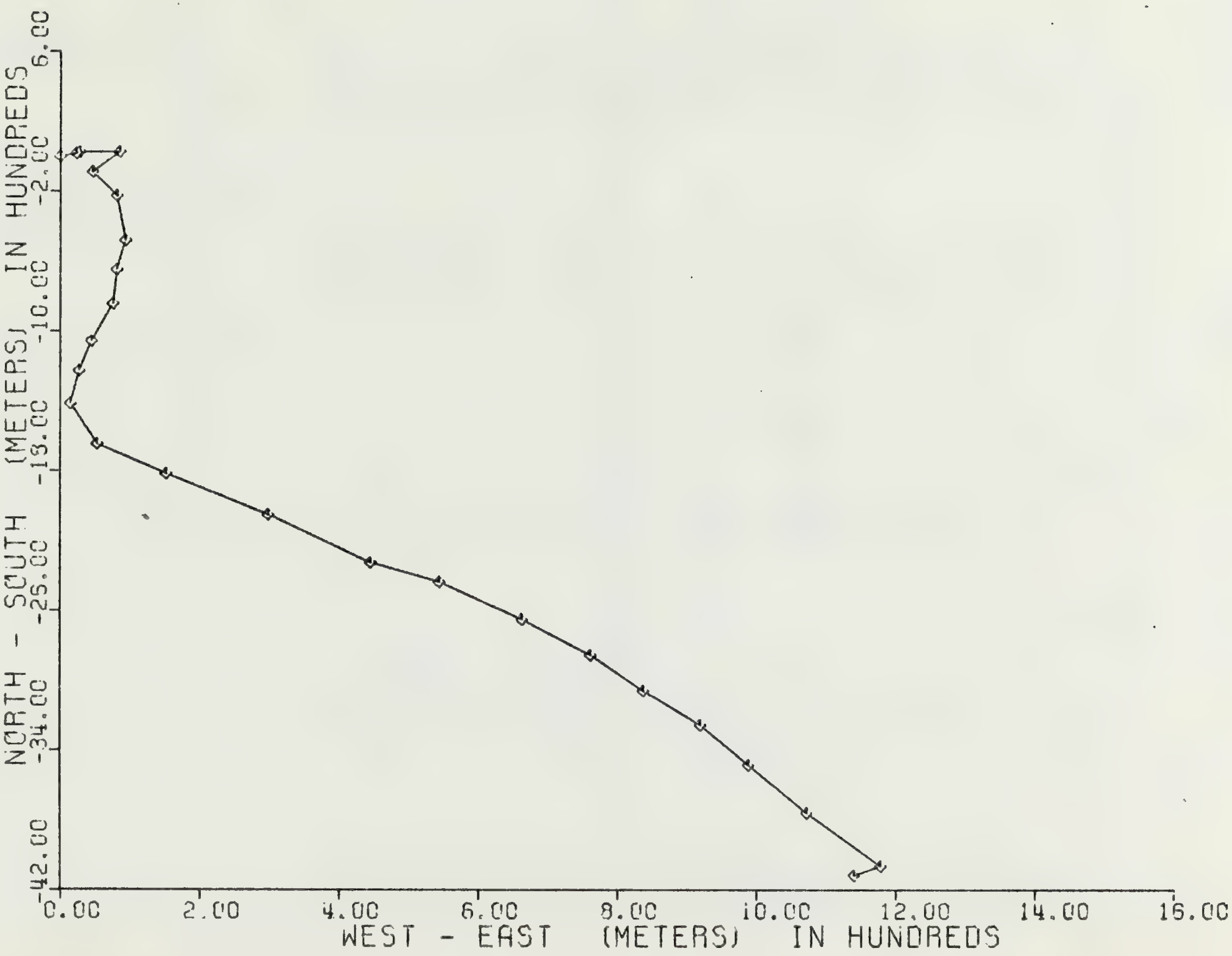


C-B PIBAL SOUNDING

TIME 650   DATE 8/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 1315 DATE: 8/7/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON BEHIND OBSTRUCTION.

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C-B PIBAL SOUNDING

SOUNDING DATE  8- 8-78

BALLOON RELEASED  650 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1                THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH   ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5        -0.1         0.0
   0.5           89.2       79.6            42.2         2.1        15.3
   1.0          333.2       61.6            39.0         4.9        18.0
   1.5          316.0       47.3            34.3         6.0        18.3
   2.0          308.3       37.1            29.4         9.5        18.6
   2.5          309.2       33.1            24.1        10.7        18.9
   3.0          310.7       31.0            20.4        12.2        19.2
   3.5          314.4       29.2            17.4        13.7        19.6
   4.0          316.6       29.7            15.2        14.8        19.3
   4.5          320.1       30.0            13.4        15.9        19.1
   5.0          323.9       30.8            13.5        16.9        18.8
   5.5          326.3       32.1            13.5        18.0        18.6
   6.0          329.1       35.1            14.3        19.5        18.3
   6.5          332.8       38.7            16.3        20.9        18.1
   7.0          337.7       43.1            19.5        23.2        17.7
   7.5          342.7       46.9            21.0        24.2        17.2
   8.0          347.1       49.1            23.3        25.4        16.8
   8.5          352.2       51.0            24.9        26.6        16.3
   9.0          357.6       51.8            26.1        27.2        15.8
   9.5            1.6       51.8            26.8        27.6        15.3
  10.0            4.1       50.9            27.2        27.9        14.9
  10.5            3.6       52.8            27.3        29.5        14.4
  11.0            1.6       55.0            27.0        31.2        13.9
  11.5            0.0       58.0            26.8        33.0        13.4
  12.0          358.0       61.0            26.9        35.3        13.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        49.5        4.4
     2        73.7        4.7
     3       159.3        5.0
     4        11.1        5.5
     5        64.7        6.0
     6        36.9        6.5
     7        37.9        7.1
     8        16.4        7.7
     9        15.0        8.3
    10        54.5        8.8
    11        69.7        9.2
    12        46.1        9.5
    13        29.6        9.6
    14       117.5        9.7
```

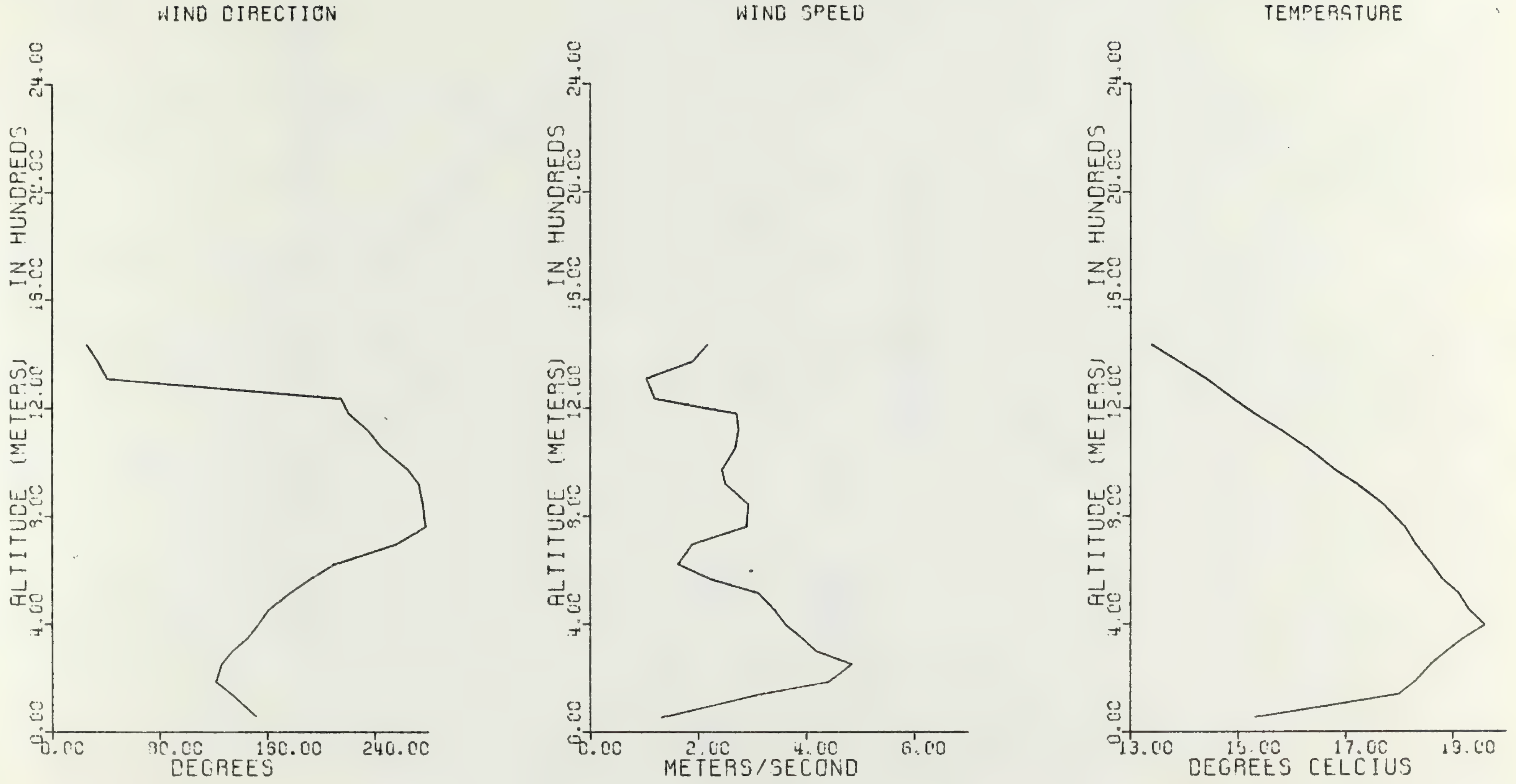
16	57.9	10.2
17	60.7	10.6
18	23.4	11.1
19	4.5	11.6
20	26.9	12.1
21	54.8	12.3
22	73.9	12.4
23	26.8	12.4
24	43.3	12.5

HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
179.	153.	4.3	15.3
458.	134.	10.3	18.0
613.	122.	14.5	18.3
827.	126.	15.9	18.6
987.	134.	13.7	18.9
1137.	145.	12.9	19.2
1299.	153.	11.9	19.6
1482.	161.	11.2	19.3
1692.	177.	10.2	19.1
1859.	192.	7.3	18.8
2040.	210.	5.3	18.6
2286.	256.	6.2	18.3
2497.	278.	9.5	18.1
2772.	276.	9.6	17.7
3020.	273.	8.2	17.2
3187.	265.	8.0	16.8
3444.	246.	8.8	16.3
3669.	235.	9.0	15.8
3868.	221.	8.9	15.3
4053.	215.	3.9	14.9
4293.	41.	3.4	14.4
4500.	34.	6.2	13.9
4702.	26.	7.1	13.4

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
54.	153.	1.3	15.3
140.	134.	3.1	18.0
187.	122.	4.4	18.3
252.	126.	4.8	18.6
301.	134.	4.2	18.9
347.	145.	3.9	19.2
396.	153.	3.6	19.6
452.	161.	3.4	19.3
516.	177.	3.1	19.1
567.	192.	2.2	18.8
622.	210.	1.6	18.6
697.	256.	1.9	18.3
761.	278.	2.9	18.1
845.	276.	2.9	17.7
921.	273.	2.5	17.2
971.	265.	2.4	16.8
1050.	246.	2.7	16.3
1118.	235.	2.7	15.8
1179.	221.	2.7	15.3
1235.	215.	1.2	14.9
1309.	41.	1.0	14.4
1372.	34.	1.9	13.9
1433.	26.	2.2	13.4

C-B PIBAL SOUNDING

TIME 650 DATE 8/8/78

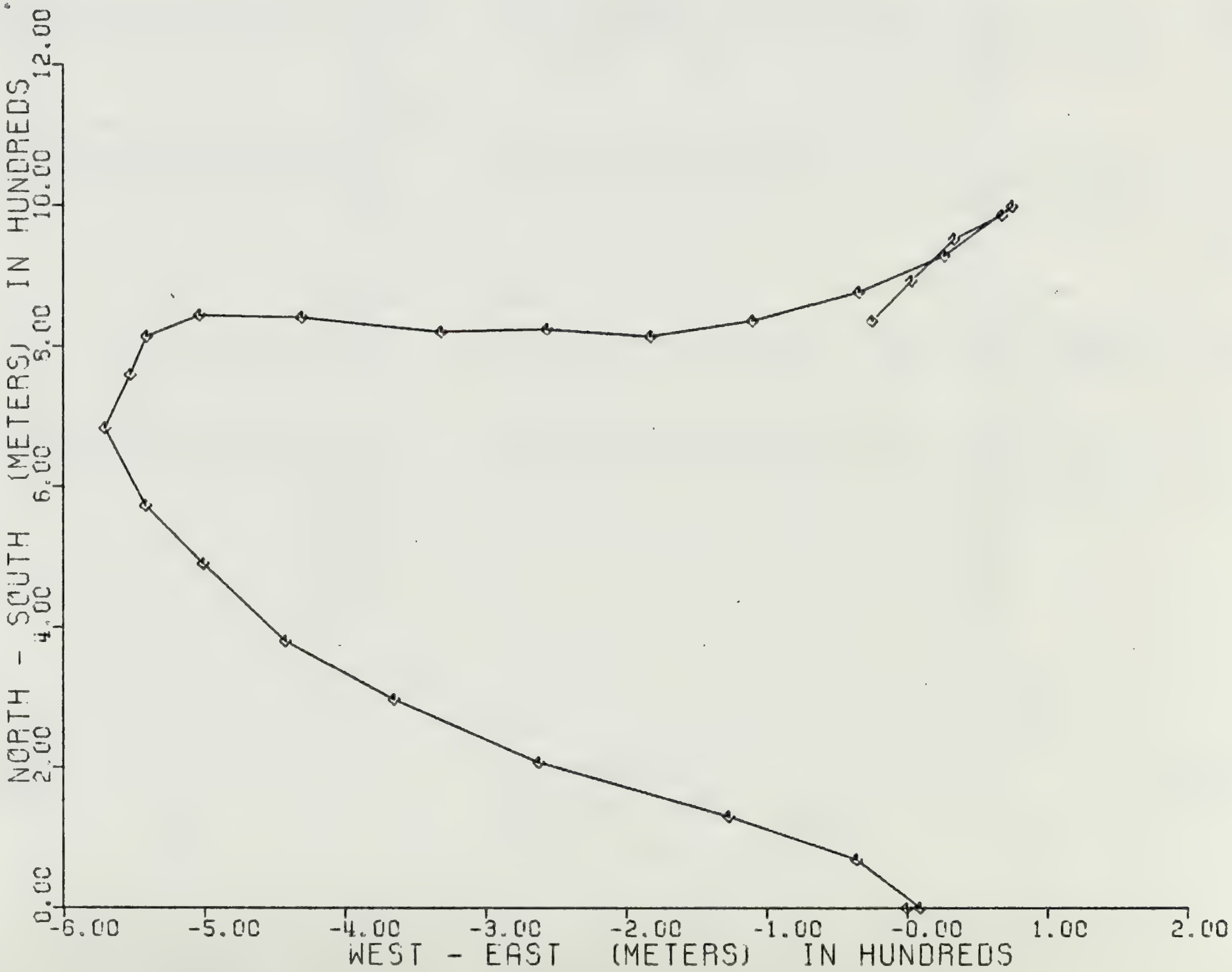


C-B PIBAL SOUNDING

TIME 650   DATE 8/8/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: PM DATE: 8/8/78

BALLOON LAUNCH RAINED OUT.

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C-B PIBAL SOUNDING

SOUNDING DATE  8-10-78

BALLOON RELEASED  645 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0

                THEODOLITE #1             THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0           42.5       -0.1        0.0
   0.5        281.2       23.2           35.9        2.9       17.0
   1.0        308.1       26.2           30.1        5.8       18.2
   1.5        326.4       27.1           26.5        8.1       19.4
   2.0        339.1       24.2           23.6        9.0       19.2
   2.5        348.8       21.7           22.2        9.9       19.1
   3.0        355.5       20.8           22.2       10.1       18.9
   3.5          2.3       19.7           23.0       10.8       18.8
   4.0          7.3       19.5           24.0       11.3       18.6
   4.5         12.2       19.5           26.3       11.7       18.5
   5.0         17.5       19.3           28.4       12.1       18.3
   5.5         21.2       19.5           30.9       12.5       18.2
   6.0         25.9       19.7           33.3       12.9       17.7
   6.5         30.5       19.8           36.0       13.4       17.3
   7.0         35.0       19.8           38.7       13.6       16.9
   7.5         39.2       20.0           40.9       13.9       16.4
   8.0         42.3       20.1           43.5       14.3       16.0
   8.5         44.6       20.5           45.5       14.8       15.6
   9.0         48.1       21.0           47.2       15.1       15.2
   9.5         49.2       21.2           48.5       15.6       14.8
  10.0         50.8       21.2           49.6       15.9       14.5
  10.5         52.0       21.4           50.7       16.3       14.2
  11.0         53.4       21.6           51.7       16.5       14.0
  11.5         54.0       21.6           52.3       16.7       13.7
  12.0         54.7       21.7           52.9       16.7       13.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      21.1        4.5
     2      11.9        5.3
     3       7.1        6.2
     4      17.0        7.5
     5      27.5        9.1
     6       7.3       10.4
     7      50.1       12.1
     8      47.3       13.6
     9     100.2       14.3
    10     112.9       15.9
    11     210.3       15.9
    12     217.0       17.2
    13     272.6       18.6
    14     276.6       20.1
    15     164.7       22.4
   16       310.3        23.6
   17       429.4        24.6
   18       212.5        25.8
   19       349.0        27.8
   20       309.4        30.0
   21       356.6        31.9
   22       332.7        32.4
   23       358.4        34.1
   24       389.5        33.7


         HEIGHT   DIRECTION   SPEED   TEMP
          FEET     DEGREES   FT/SEC  DEG C

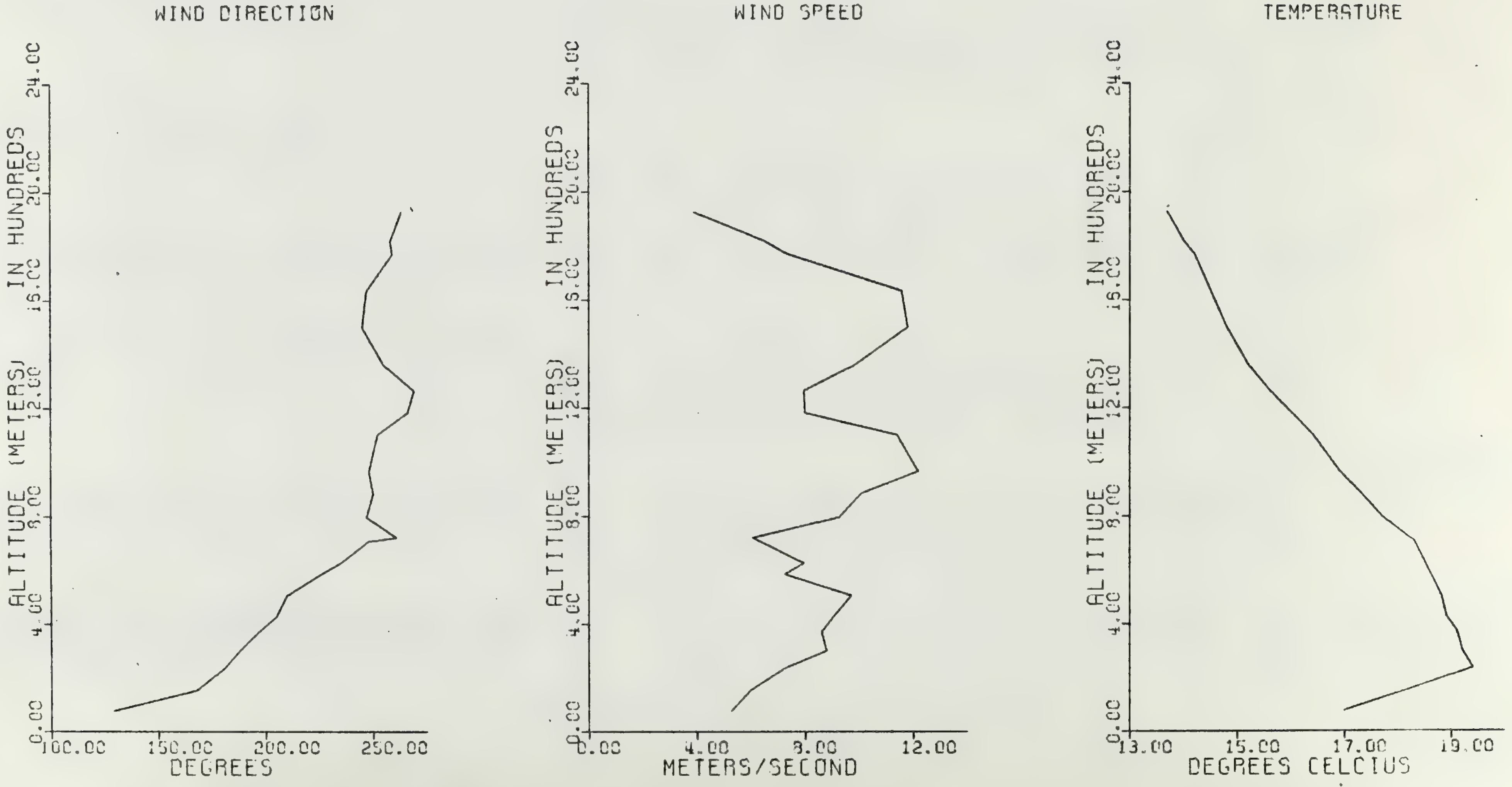
           254.     129.       17.3   17.0
           508.     168.       19.7   18.2
           778.     181.       23.8   19.4
           989.     188.       28.9   19.2
          1221.     197.       28.3   19.1
          1404.     205.       29.7   18.9
          1663.     210.       31.9   18.8
          1922.     226.       23.8   18.6
          2056.     235.       26.1   18.5
          2324.     248.       20.8   18.3
          2364.     261.       19.9   18.2
          2618.     247.       30.4   17.7
          2907.     250.       33.1   17.3
          3175.     248.       40.0   16.9
          3617.     252.       37.4   16.4
          3881.     266.       26.2   16.0
          4151.     269.       26.1   15.6
          4466.     255.       32.3   15.2
          4922.     245.       38.7   14.8
          5364.     247.       38.0   14.5
          5809.     259.       24.1   14.2
          5968.     258.       21.3   14.0
          6315.     263.       12.8   13.7


         HEIGHT   DIRECTION   SPEED   TEMP
         METERS    DEGREES    M/SEC  DEG C

            77.     129.        5.3   17.0
           155.     168.        6.0   18.2
           237.     181.        7.3   19.4
           301.     188.        8.8   19.2
           372.     197.        8.6   19.1
           428.     205.        9.1   18.9
           507.     210.        9.7   18.8
           586.     226.        7.3   18.6
           627.     235.        8.0   18.5
           708.     248.        6.3   18.3
           721.     261.        6.1   18.2
           798.     247.        9.3   17.7
           886.     250.       10.1   17.3
           968.     248.       12.2   16.9
          1102.     252.       11.4   16.4
          1183.     266.        8.0   16.0
          1265.     269.        8.0   15.6
          1361.     255.        9.8   15.2
          1500.     245.       11.8   14.8
          1635.     247.       11.6   14.5
          1770.     259.        7.3   14.2
          1819.     258.        6.5   14.0
          1925.     263.        3.9   13.7
```

C-B PIBAL SOUNDING

TIME 645   DATE 8/10/78

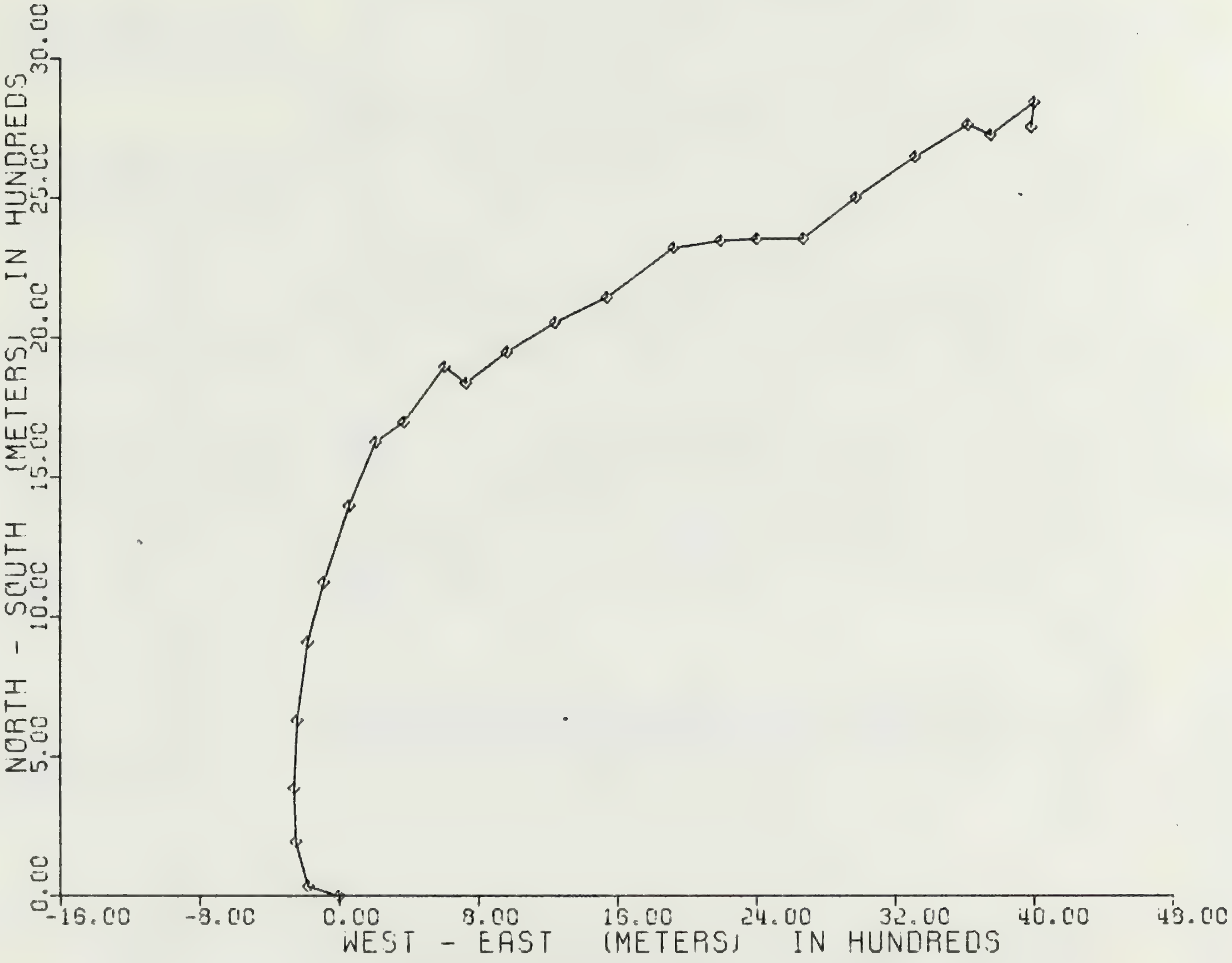


C-B PIBAL SOUNDING

TIME 645   DATE 8/10/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-10-78

BALLOON RELEASED 1300 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4304.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1                THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0            42.5       -0.1        0.0
   0.5         93.2       30.0            46.7        3.2       29.2
   1.0         88.4       47.5            50.4       10.8       27.9
   1.5         90.2       46.1            52.7       13.4       26.6
   2.0         91.1       44.7            56.6       17.4       25.4
   2.5         83.1       45.1            56.5       19.9       24.1
   3.0         79.7       45.8            57.3       23.0       22.8
   3.5         79.7       47.0            57.8       24.8       21.6
   4.0         78.4       47.7            58.6       26.4       20.4
   4.5         78.0       47.3            59.9       28.0       19.2
   5.0         77.4       45.4            61.0       28.3       18.0
   5.5         78.6       44.2            62.7       28.6       16.9
   6.0         78.8       43.9            63.9       29.3       15.7
   6.5         79.9       42.3            65.2       29.4       14.5
   7.0         81.0       41.0            66.8       28.9       13.6
   7.5         82.5       39.8            68.4       28.4       13.0
   8.0         83.6       38.6            69.6       23.1       12.3
   8.5         84.6       37.1            71.0       27.3       11.6
   9.0         85.3       36.4            72.2       27.1       11.0
   9.5         86.1       35.8            72.9       27.3       10.3
  10.0         86.7       35.6            73.9       27.5        9.6
  10.5         87.1       35.0            74.6       27.2        9.0
  11.0         88.8       34.0            76.3       26.9        8.3
  11.5         89.5       33.3            77.8       26.5        7.8
  12.0         90.6       32.9            79.0       26.2        7.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       11.6       5.0
     2       50.9       6.2
     3       31.0       6.9
     4       25.8       8.3
     5       37.3       9.6
     6       34.3      11.1
     7       18.8      11.7
     8       85.6      12.7
     9      104.9      14.2
    10      107.4      15.7
    11      124.0      16.9
    12      173.0      18.2
    13       87.3      19.6
    14      150.6      20.5
    15      185.0      21.2
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     16      150.1        22.1
     17      189.0        23.0
     18      237.0        24.1
     19      123.1        25.0
     20      143.5        26.2
     21      166.3        26.9
     22      128.7        28.0
     23      248.4        29.8
     24      314.7        30.3


             HEIGHT   DIRECTION   SPEED  TEMP
              FEET     DEGREES   FT/SEC DEG C

               286.      268.      16.8  29.2
              1090.      268.      14.5  27.9
              1405.      274.      17.1  26.6
              2005.      255.      19.9  25.4
              2530.      240.      20.4  24.1
              3228.      249.      14.1  22.8
              3596.      252.       9.7  21.6
              4069.      253.      16.7  20.4
              4680.      255.      22.8  19.2
              5130.      260.      22.6  18.0
              5502.      265.      20.2  16.9
              5994.      264.      22.5  15.7
              6383.      271.      22.4  14.5
              6561.      281.      18.2  13.6
              6659.      283.      17.9  13.0
              6828.      279.      19.7  12.3
              6899.      279.      20.6  11.6
              7148.      273.      18.6  11.0
              7390.      278.      18.3  10.3
              7748.      278.      17.3   9.6
              7868.      289.      19.7   9.0
              8049.      286.      29.1   8.3
              8431.      289.      23.3   7.8


             HEIGHT   DIRECTION   SPEED  TEMP
             METERS    DEGREES    M/SEC  DEG C

                87.      268.       5.1  29.2
               332.      268.       4.4  27.9
               428.      274.       5.2  26.6
               611.      255.       6.1  25.4
               771.      240.       6.2  24.1
               984.      249.       4.3  22.8
              1096.      252.       3.0  21.6
              1240.      253.       5.1  20.4
              1426.      255.       6.9  19.2
              1564.      260.       6.9  18.0
              1677.      265.       6.2  16.9
              1827.      264.       6.9  15.7
              1946.      271.       6.8  14.5
              2000.      281.       5.5  13.6
              2030.      283.       5.5  13.0
              2081.      279.       6.0  12.3
              2103.      279.       6.3  11.6
              2179.      278.       5.7  11.0
              2252.      278.       5.6  10.3
              2362.      278.       5.3   9.6
              2398.      289.       6.0   9.0
              2453.      286.       8.9   8.3
              2570.      289.       7.1   7.8
```
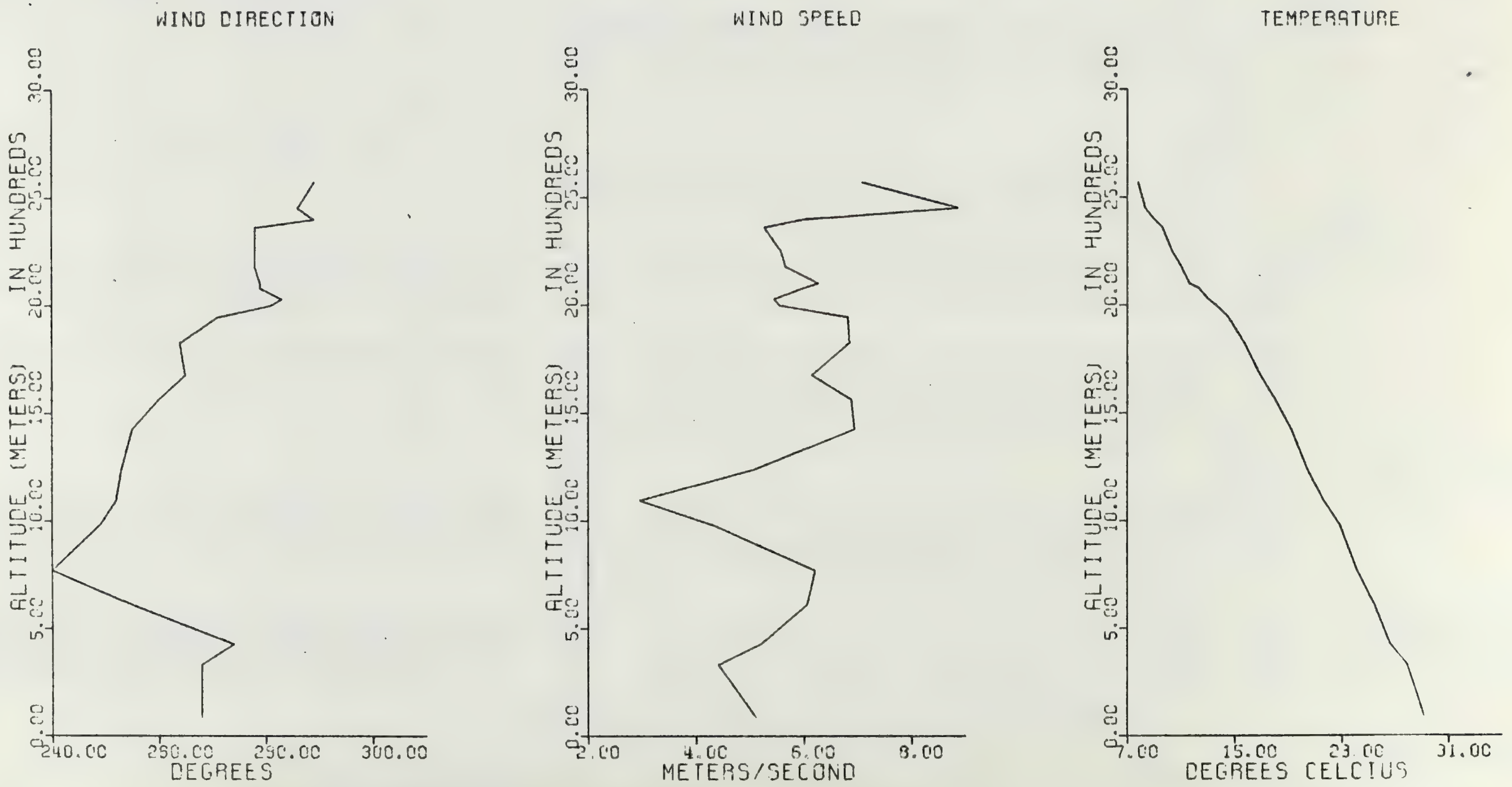

C-B PIBAL SOUNDING

TIME 1300 DATE 8/10/78

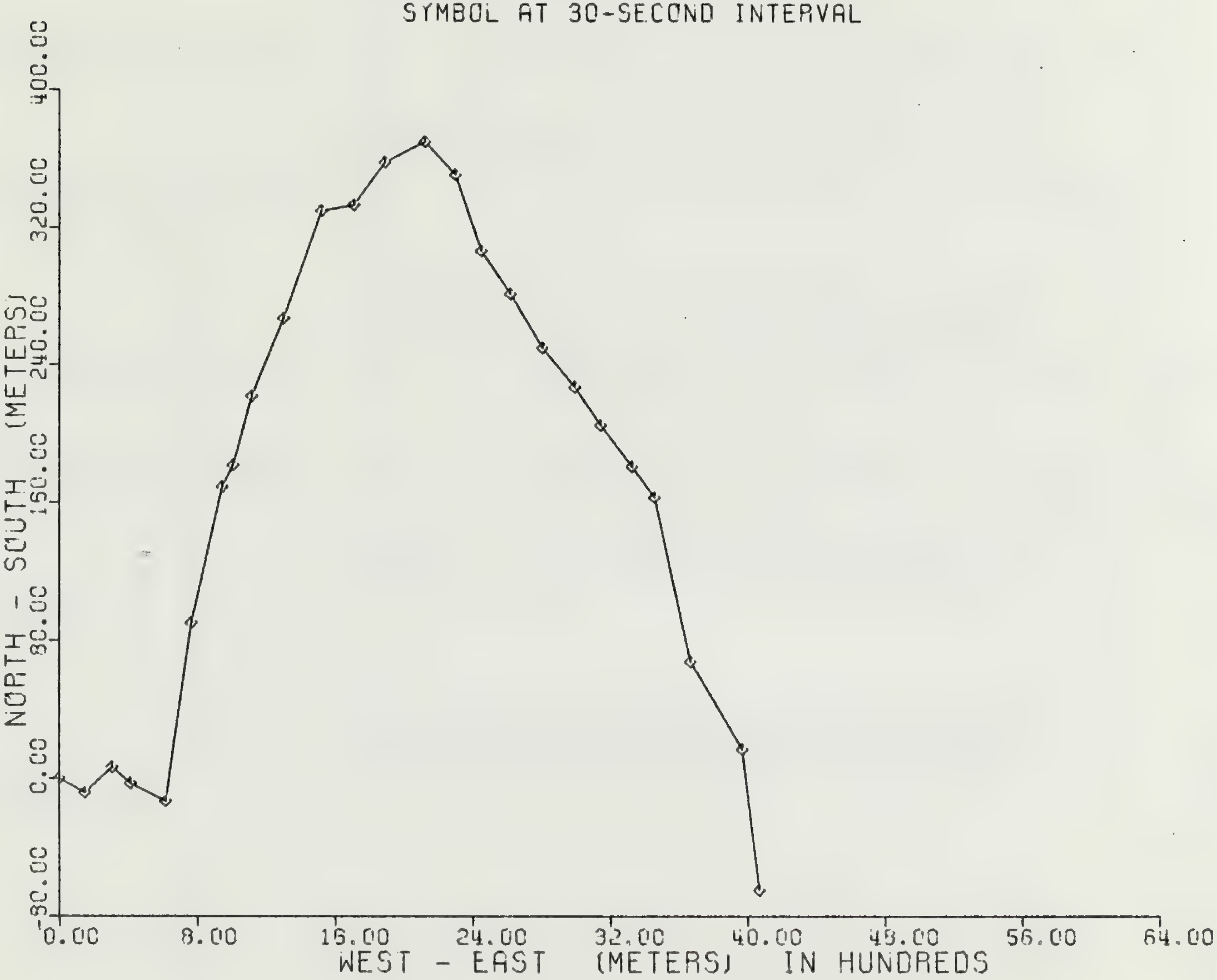


C-B PIBAL SOUNDING

TIME 1300   DATE 8/10/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-11-78

BALLOON RELEASED  655 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0

                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1         0.0
   0.5          280.9       28.9            37.5        2.5        13.2
   1.0          286.7       34.4            35.6        4.9        13.7
   1.5          291.2       38.7            34.2        7.4        14.2
   2.0          332.4       46.8            32.8       10.1        14.7
   2.5          356.1       38.6            31.4       11.9        15.2
   3.0            8.5       33.5            31.3       13.2        15.7
   3.5           14.5       31.6            32.2       13.9        16.2
   4.0           22.3       29.6            34.4       14.4        16.7
   4.5           29.3       27.7            36.0       14.5        17.0
   5.0           33.6       26.5            38.7       14.8        17.1
   5.5           38.3       25.4            40.5       14.9        17.2
   6.0           39.6       24.2            42.1       14.8        17.2
   6.5           41.9       23.0            43.4       14.8        17.3
   7.0           43.3       22.6            44.3       14.9        17.2
   7.5           45.5       22.1            45.8       14.9        16.9
   8.0           46.5       21.8            46.6       15.2        16.6
   8.5           48.0       21.7            47.5       15.4        16.3
   9.0           49.3       21.5            48.4       15.5        16.0
   9.5           50.6       21.5            49.5       15.8        15.7
  10.0           51.4       21.4            50.2       15.9        15.4
  10.5           52.6       21.4            51.0       16.2        15.1
  11.0           52.6       21.4            51.2       16.4        14.8
  11.5           52.8       21.5            51.7       16.6        14.5
  12.0           53.3       21.6            52.0       16.8        14.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      42.7        4.4
     2      14.2        4.6
     3      26.1        4.9
     4      38.2        5.7
     5       0.7        7.2
     6      26.1        8.8
     7      65.3        9.9
     8     112.2       11.2
     9       3.0       13.0
    10     151.7       14.0
    11      67.3       15.7
    12     259.3       16.5
    13     280.0       18.5
    14     298.1       19.7
    15     324.3       21.1
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16     361.3      23.1
17     323.4      24.7
18     311.2      26.1
19     345.2      28.0
20     369.4      29.1
21     315.4      31.2
22     362.9      32.7
23     473.1      33.7
24     432.5      34.8


         HEIGHT  DIRECTION   SPEED  TEMP
          FEET    DEGREES   FT/SEC DEG C

          241.     107.      10.0  13.2
          410.     127.       5.0  13.7
          587.     193.      10.8  14.2
          952.     203.      24.2  14.7
         1277.     205.      30.1  15.2
         1632.     214.      25.9  15.7
         1853.     227.      23.5  16.2
         2106.     232.      31.7  16.7
         2435.     238.      28.9  17.0
         2598.     244.      28.1  17.1
         2896.     242.      25.2  17.2
         2964.     238.      27.4  17.2
         3271.     237.      30.6  17.3
         3474.     244.      25.3  17.2
         3692.     241.      32.2  16.9
         4070.     239.      33.3  16.6
         4379.     245.      28.8  16.3
         4637.     246.      30.9  16.0
         5017.     246.      28.4  15.7
         5241.     246.      30.5  15.4
         5675.     240.      32.4  15.1
         5985.     238.      22.0  14.8
         6217.     244.      18.6  14.5


         HEIGHT  DIRECTION   SPEED  TEMP
         METERS   DEGREES    M/SEC  DEG C

           73.     107.       3.0  13.2
          125.     127.       1.5  13.7
          179.     193.       3.3  14.2
          290.     203.       7.4  14.7
          389.     205.       9.2  15.2
          497.     214.       7.9  15.7
          565.     227.       7.2  16.2
          642.     232.       9.7  16.7
          742.     238.       8.8  17.0
          792.     244.       8.6  17.1
          883.     242.       7.7  17.2
          903.     238.       8.4  17.2
          997.     237.       9.3  17.3
         1059.     244.       7.7  17.2
         1125.     241.       9.8  16.9
         1241.     239.      10.1  16.6
         1335.     245.       8.8  16.3
         1413.     246.       9.4  16.0
         1529.     246.       8.7  15.7
         1597.     246.       9.3  15.4
         1730.     240.       9.9  15.1
         1824.     238.       6.7  14.8
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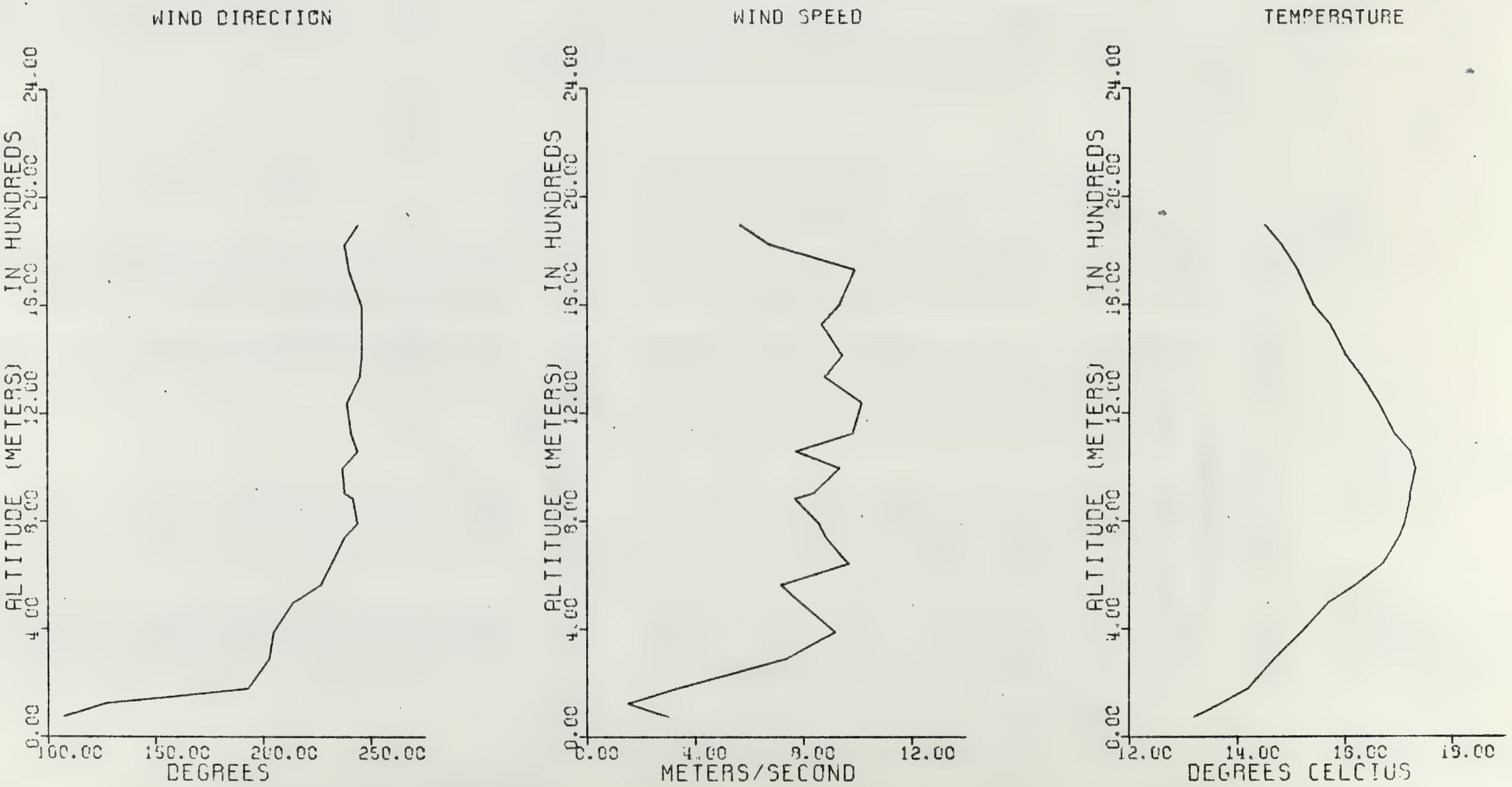
C-B PIBAL SOUNDING

TIME 655   DATE 8/11/78

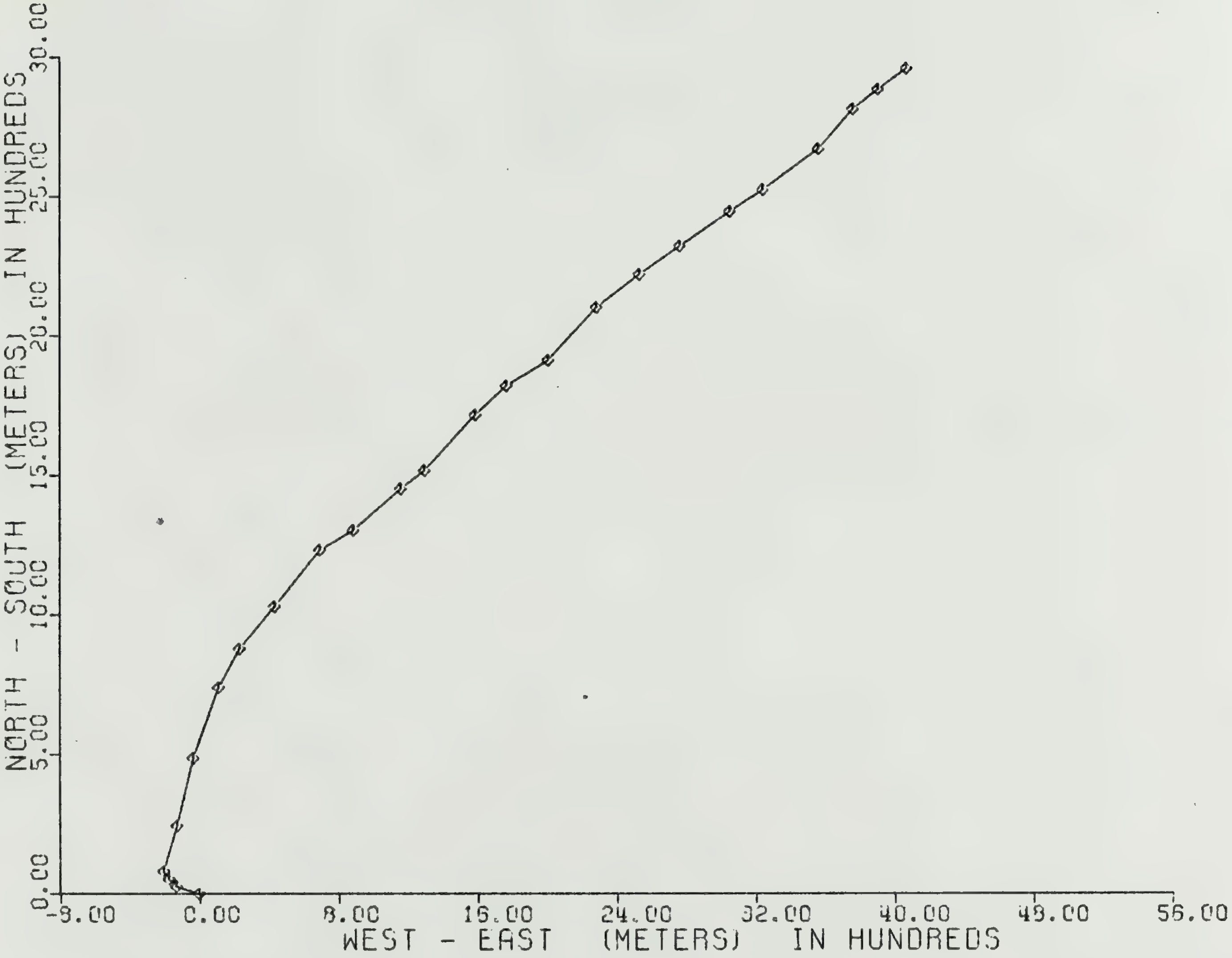


C-B PIBAL SOUNDING

TIME 655   DATE 8/11/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-11-78

BALLOON RELEASED 1305 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0

                THEODOLITE #1               THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0            42.5       -0.1        0.0
   0.5         166.2       23.4            47.8        1.9       26.6
   1.0         159.2       27.9            53.1        5.6       26.0
   1.5         152.4       28.3            59.2        8.6       25.4
   2.0         148.3       28.9            63.6       11.2       24.8
   2.5         145.3       31.2            68.1       14.6       24.2
   3.0         142.0       33.2            71.3       17.7       23.6
   3.5         140.1       33.8            74.0       19.7       23.0
   4.0         137.2       33.7            75.9       20.8       22.2
   4.5         134.1       35.7            77.4       23.3       21.0
   5.0         132.4       37.0            78.2       25.0       19.8
   5.5         130.3       40.3            78.7       27.7       18.6
   6.0         126.6       41.7            78.1       29.4       17.4
   6.5         122.7       43.0            77.0       30.9       16.2
   7.0         117.4       44.3            75.2       31.6       15.0
   7.5         112.7       46.1            72.4       33.2       13.7
   8.0         110.2       47.7            71.6       35.1       12.5
   8.5         106.3       50.1            70.5       37.1        9.7
   9.0         105.9       51.2            70.8       38.8        6.9
   9.5         105.3       52.0            71.0       40.6        4.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      53.1       4.4
     2      35.4       4.8
     3      45.4       5.3
     4      27.4       5.9
     5      25.3       6.5
     6       4.6       7.2
     7      28.9       7.7
     8      58.8       8.3
     9      96.9       9.0
    10     132.1       9.6
    11     117.2      10.3
    12     206.2      10.9
    13     307.7      11.6
    14     345.2      12.2
    15     503.2      12.6
    16     597.0      13.4
    17     605.7      14.4
    18     664.0      15.2
    19     782.0      16.0
```

```
HEIGHT  DIRECTION  SPEED   TEMP
 FEET    DEGREES   FT/SEC DEG C

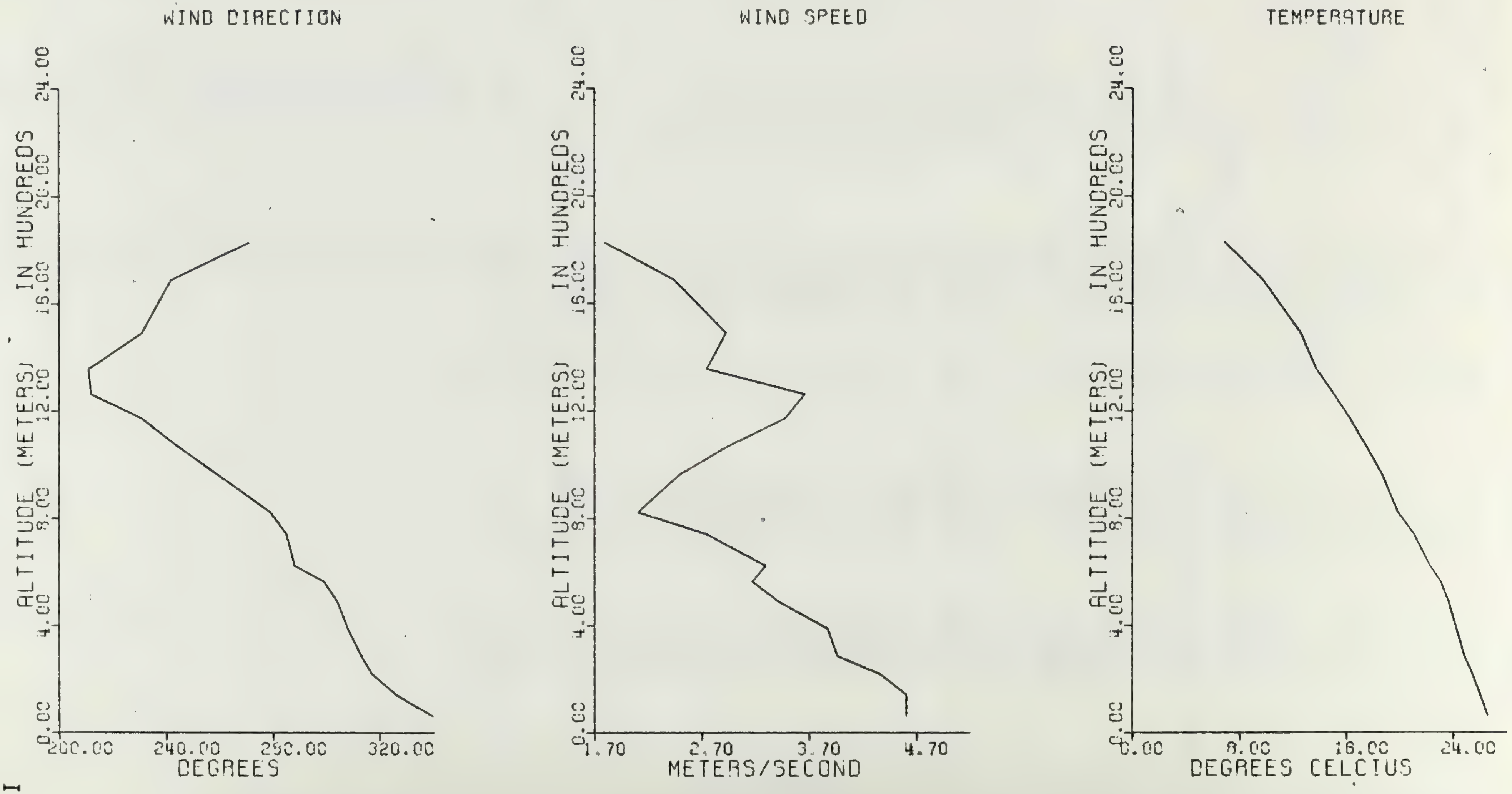
  202.     340.     15.1   26.6
  472.     326.     15.1   26.0
  723.     317.     14.3   25.4
  945.     313.     13.0   24.3
 1275.     308.     12.7   24.2
 1608.     304.     11.2   23.6
 1857.     299.     10.4   23.0
 2050.     288.     10.8   22.2
 2433.     285.      9.0   21.0
 2705.     279.      6.9   19.8
 3172.     259.      8.2   18.6
 3517.     244.      9.7   17.4
 3849.     231.     11.4   16.2
 4148.     212.     12.0   15.0
 4453.     211.      9.0   13.7
 4896.     231.      9.6   12.5
 5542.     242.      8.0    9.7
 5994.     271.      5.9    6.9
```

```
HEIGHT  DIRECTION  SPEED   TEMP
METERS   DEGREES   M/SEC   DEG C

   61.     340.      4.6   26.6
  144.     326.      4.6   26.0
  220.     317.      4.4   25.4
  288.     313.      4.0   24.8
  388.     308.      3.9   24.2
  490.     304.      3.4   23.6
  566.     299.      3.2   23.0
  625.     288.      3.3   22.2
  742.     285.      2.7   21.0
  825.     279.      2.1   19.8
  967.     259.      2.5   18.6
 1072.     244.      3.0   17.4
 1173.     231.      3.5   16.2
 1264.     212.      3.7   15.0
 1357.     211.      2.7   13.7
 1492.     231.      2.9   12.5
 1689.     242.      2.4    9.7
 1827.     271.      1.8    6.9
```

C-B PIBAL SOUNDING

TIME 1305 DATE 8/11/78

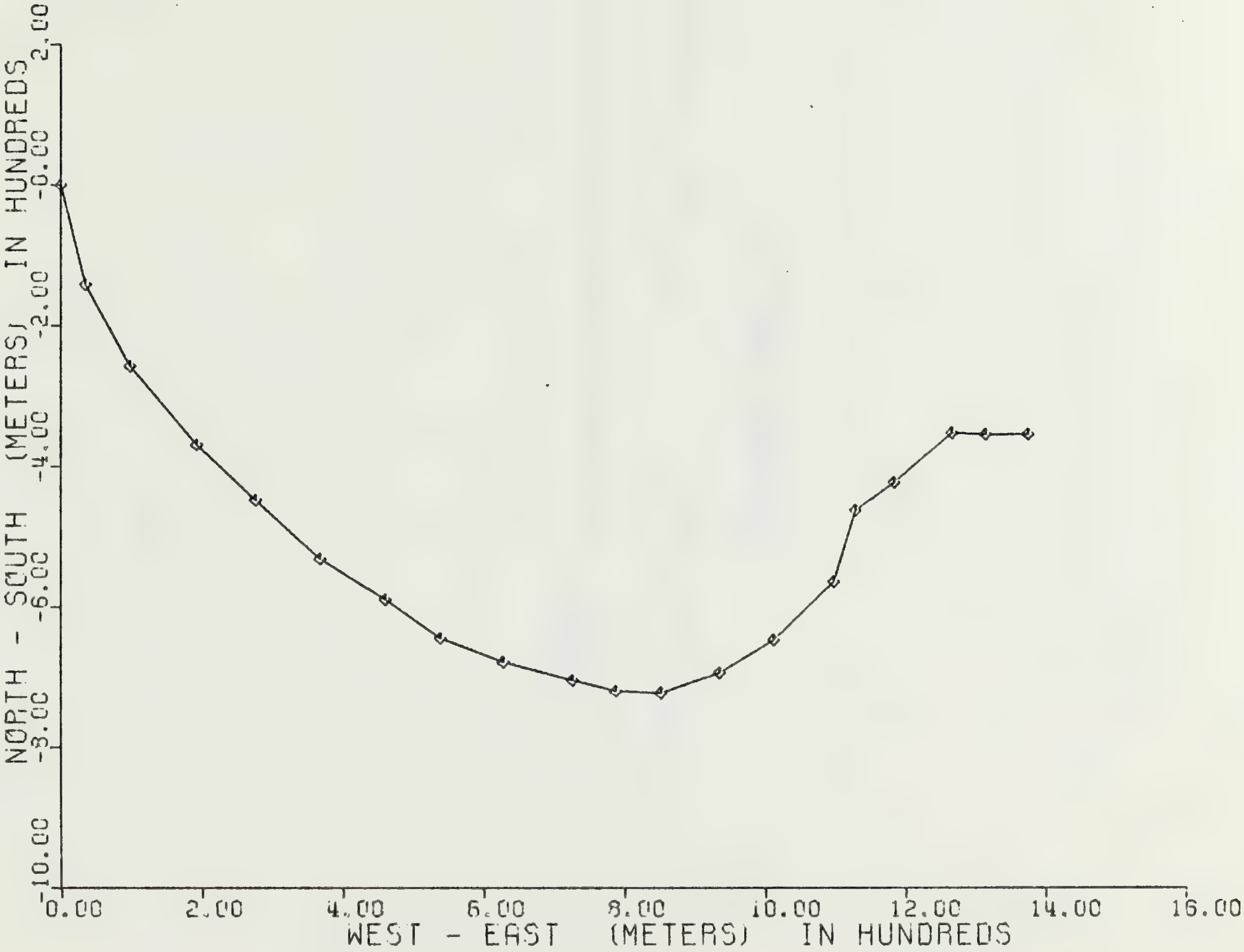


C-B PIBAL SOUNDING

TIME 1305 DATE 8/11/78

PIBAL TRAJECTORY - LAUNCH AT ØRIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 0645 DATE: 8/14/78

UNABLE TO TRACK BALLOON DUE TO LOW CLOUD COVER.

C-B PIBAL SOUNDING

TIME: 1400 DATE: 8/14/78

BALLOON LAUNCH RAINED OUT.

```
C-B PIBAL SOUNDING

SOUNDING DATE  8-16-78                              ** SUSPECT DATA **

BALLOON RELEASED  650 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1          THEODOLITE #2

  TIME       AZIMUTH  ELEVATION      AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0           0.0        0.0         42.5       -0.1        0.0
  0.5         353.2       12.4         32.7        2.6       15.4
  1.0         358.3       11.7         25.1        4.1       16.7
  1.5           2.4       12.0         20.8        5.8       18.0
  2.0           7.1       12.6         19.0        6.9       17.6
  2.5          10.7       12.9         18.6        7.7       17.3
  3.0          13.3       12.9         18.2        8.3       16.8
  3.5          14.8       13.0         17.6        8.6       16.0
  4.0          16.1       12.9         17.3        9.0       15.2
  4.5          17.6       13.8         17.5        9.1       14.5
  5.0          18.8       12.9         17.8        9.5       13.7
  5.5          21.4       12.9         18.8        9.8       13.0
  6.0          23.7       12.9         20.0        9.9       12.2
  6.5          25.2       12.8         21.0       10.0       11.4
  7.0          27.2       12.6         22.1       10.1       10.7
  7.5          28.7       12.5         23.0       10.2       10.1
  8.0          29.6       12.4         23.4       10.2        9.5
  8.5          30.4       12.3         24.1       10.2        8.9
  9.0          31.4       12.2         24.6       10.2        8.3
  9.5          32.6       12.0         25.2       10.2        7.5
 10.0          33.4       11.9         25.7       10.0        6.7
 10.5          34.3       11.8         26.2       10.0        6.0
 11.0          35.0       11.7         26.8       10.0        5.2
 11.5          35.7       11.6         27.3        9.9        4.4
 12.0          35.9       11.5         27.7        9.9        3.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME       RHO       ERROR

    1       14.0        6.1
    2      113.5        9.2
    3      179.7       13.3
    4      385.6       18.7
    5      608.9       24.5
    6      916.5       31.8
    7     1372.8       35.1
    8     1761.6       34.3
    9     2044.3       17.7
   10     2130.5        7.9
   11     1974.8      -12.0
   12     1771.5      -15.6
   13     1645.6      -16.3
   14     1471.8      -16.3
   15     1370.3      -15.3
  16      1310.5       -14.5
  17      1271.9       -13.8
  18      1220.2       -12.8
  19      1154.1       -11.8
  20      1134.8       -10.6
  21      1101.0        -9.8
  22      1076.4        -9.3
  23      1056.7        -8.5
  24      1043.5        -8.6


          HEIGHT   DIRECTION   SPEED   TEMP
           FEET     DEGREES   FT/SEC  DEG C

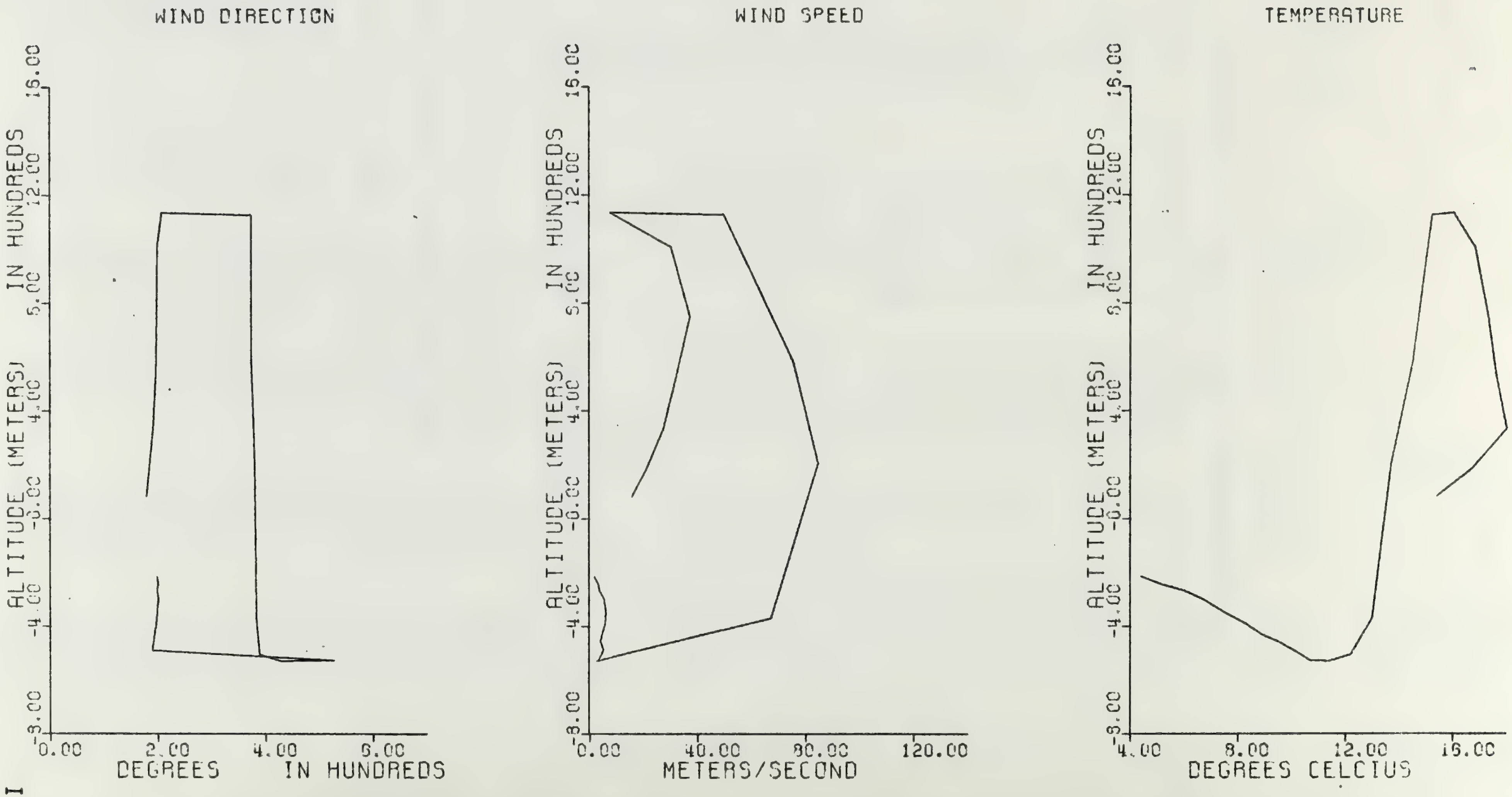
            279.     179.       52.0   15.4
            612.     184.       69.8   16.7
           1093.     191.       90.2   18.0
           1750.     196.      105.9   17.6
           2458.     198.      122.6   17.3
           3303.     199.       99.0   16.8
           3724.     207.       24.6   16.0
           3695.      14.      163.4   15.2
           1921.      14.      247.6   14.5
            683.      20.      278.2   13.7
          -1211.      23.      221.4   13.0
          -1654.      29.       40.2   12.2
          -1736.      69.        9.3   11.4
          -1728.     169.       11.6   10.7
          -1608.     190.       17.9   10.1
          -1497.     192.       14.2    9.5
          -1415.     194.       16.0    8.9
          -1281.     197.       19.9    8.3
          -1140.     199.       20.8    7.5
           -982.     201.       18.6    6.7
           -874.     199.       12.8    6.0
           -802.     201.       11.7    5.2
           -701.     199.        6.6    4.4


          HEIGHT   DIRECTION   SPEED   TEMP
          METERS    DEGREES    M/SEC  DEG C

             85.     179.       15.8   15.4
            186.     184.       21.3   16.7
            333.     191.       27.5   18.0
            533.     196.       32.3   17.6
            749.     198.       37.4   17.3
           1007.     199.       30.2   16.8
           1135.     207.        7.5   16.0
           1126.      14.       49.8   15.2
            586.      14.       75.5   14.5
            208.      20.       84.8   13.7
           -369.      23.       67.5   13.0
           -504.      29.       12.3   12.2
           -529.      69.        2.8   11.4
           -527.     169.        3.5   10.7
           -490.     190.        5.5   10.1
           -456.     192.        4.3    9.5
           -431.     194.        4.9    8.9
           -390.     197.        6.1    8.3
           -348.     199.        6.3    7.5
           -299.     201.        5.7    6.7
           -266.     199.        3.9    6.0
           -244.     201.        3.6    5.2
           -214.     199.        2.0    4.4
```

C-B PIBAL SOUNDING

TIME 650   DATE 8/16/78


WIND DIRECTION

WIND SPEED

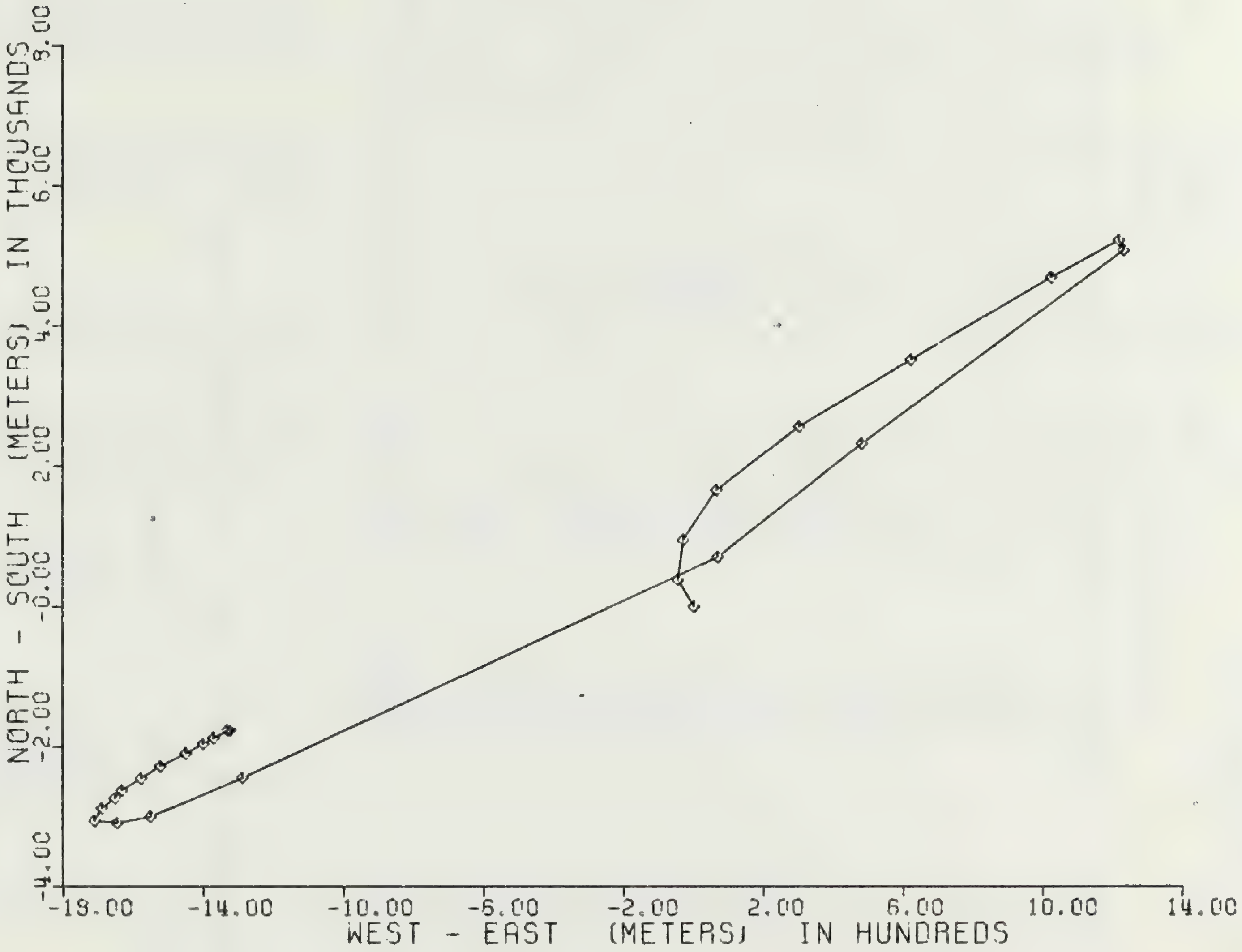
TEMPERATURE

C-B PIBAL SOUNDING

TIME 650 DATE 8/16/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-16-78                                   ** SUSPECT DATA **

BALLOON RELEASED 1430 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0       0.0            42.5      -0.1         0.0
   0.5         66.1      18.1            39.4       3.0        27.0
   1.0         67.6      14.1            38.1       4.4        25.7
   1.5         68.7      22.5            37.4       8.7        24.4
   2.0         69.1      27.8            36.5      13.3        23.1
   2.5         68.4      34.1            35.5      16.4        21.8
   3.0         66.6      33.5            34.2      18.6        20.5
   3.5         65.2      33.9            32.7      20.3        19.2
   4.0         64.4      33.2            31.4      21.1        17.9
   4.5         63.1      32.6            30.0      21.6        16.6
   5.0         60.6      31.7            28.1      22.2        15.5
   5.5         59.1      31.2            26.2      22.3        14.6
   6.0         57.2      29.7            24.5      21.9        13.7
   6.5         56.1      27.9            23.1      21.3        12.8
   7.0         55.5      26.2            22.1      20.6        12.0
   7.5         56.4      25.0            22.2      19.9        11.1
   8.0         56.9      23.5            22.3      18.9        10.2
   8.5         57.6      22.4            22.5      18.4         9.3
   9.0         58.5      21.9            22.9      18.1         8.4
   9.5         59.4      21.6            23.5      18.1         7.7
  10.0         60.5      20.9            24.4      17.8         7.2
  10.5         61.1      20.7            25.4      17.4         6.8
  11.0         63.4      20.0            26.5      17.2         6.3
  11.5         65.0      19.6            27.8      16.8         5.8
  12.0         66.0      19.0            28.7      16.4         5.4



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      357.2        3.9
     2      480.6        3.5
     3      846.7        4.0
     4     1208.3        4.4
     5     1432.4        5.0
     6     1652.4        4.7
     7     1832.1        4.4
     8     1939.0        3.9
     9     2018.6        3.4
    10     2106.4        2.7
    11     2153.5        2.1
    12     2139.7        1.3
    13     2084.7        0.6
    14     2009.1        0.1
    15     1932.7        0.1
```

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16    1832.3      -0.0
17    1765.7      -0.0
18    1729.9       0.1
19    1713.1       0.2
20    1666.6       0.4
21    1632.9       0.6
22    1591.5       0.9
23    1548.2       1.3
24    1502.2       1.5


          HEIGHT  DIRECTION  SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

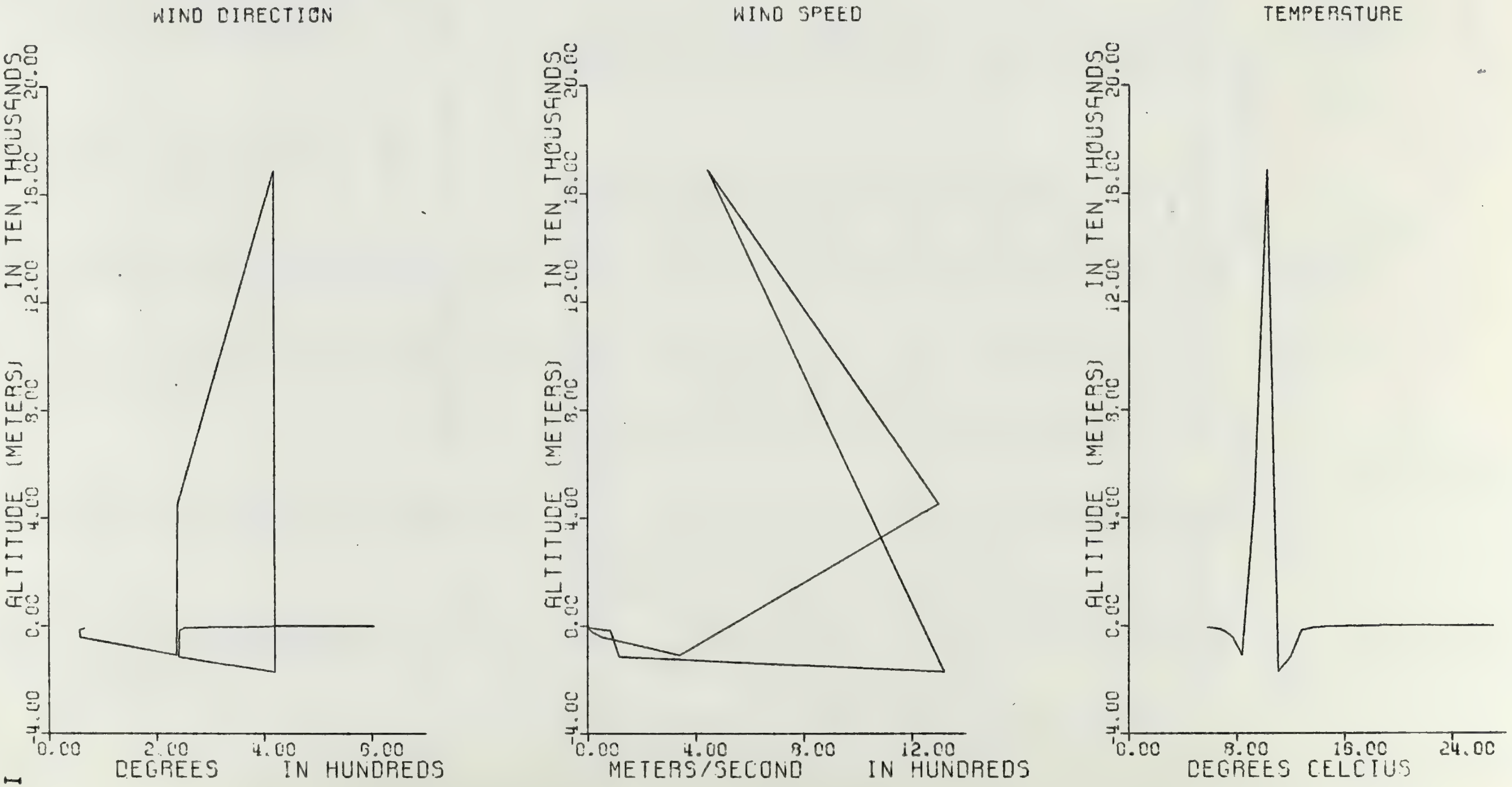
            -63.      65.      6.6  27.0
           -150.     243.      1.8  25.7
            -28.     244.      9.7  24.4
            159.     240.      8.1  23.1
            470.     231.      2.6  21.8
            398.      65.      3.6  20.5
            297.      58.      5.0  19.2
             61.      54.      6.0  17.9
           -214.      47.      6.2  16.6
           -712.      33.      4.9  15.5
          -1309.     304.      3.7  14.6
          -2559.     251.     24.3  13.7
          -5948.     242.    273.9  12.8
         -37643.     241.    378.1  12.0
         -55974.      60.   4331.3  11.1
         553528.      59.   1459.1  10.2
         148730.     240.   4260.1   9.3
         -35820.     238.   1119.2   8.4
         -14360.      59.    186.5   7.7
          -7891.      58.     59.7   7.2
          -4911.      59.     25.5   6.8
          -3177.      66.     11.4   6.3
          -2215.      66.      3.5   5.8


          HEIGHT  DIRECTION  SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

            -19.      65.      2.0  27.0
            -46.     243.      0.5  25.7
             -9.     244.      3.0  24.4
             48.     240.      2.5  23.1
            143.     231.      0.8  21.8
            121.      65.      1.1  20.5
             91.      58.      1.5  19.2
             19.      54.      1.8  17.9
            -65.      47.      1.9  16.6
           -217.      33.      1.5  15.5
           -399.     304.      1.1  14.6
           -780.     251.      7.4  13.7
          -1813.     242.     83.5  12.8
         -11474.     241.    115.2  12.0
         -17061.      60.   1320.2  11.1
         168715.      59.    444.7  10.2
          45333.     240.   1298.5   9.3
         -10918.     238.    341.1   8.4
          -4377.      59.     56.8   7.7
          -2405.      58.     18.2   7.2
          -1497.      59.      7.8   6.8
           -968.      66.      3.5   6.3
           -675.      66.      1.1   5.8
```

C-B PIBAL SOUNDING

TIME 1430   DATE 8/16/78

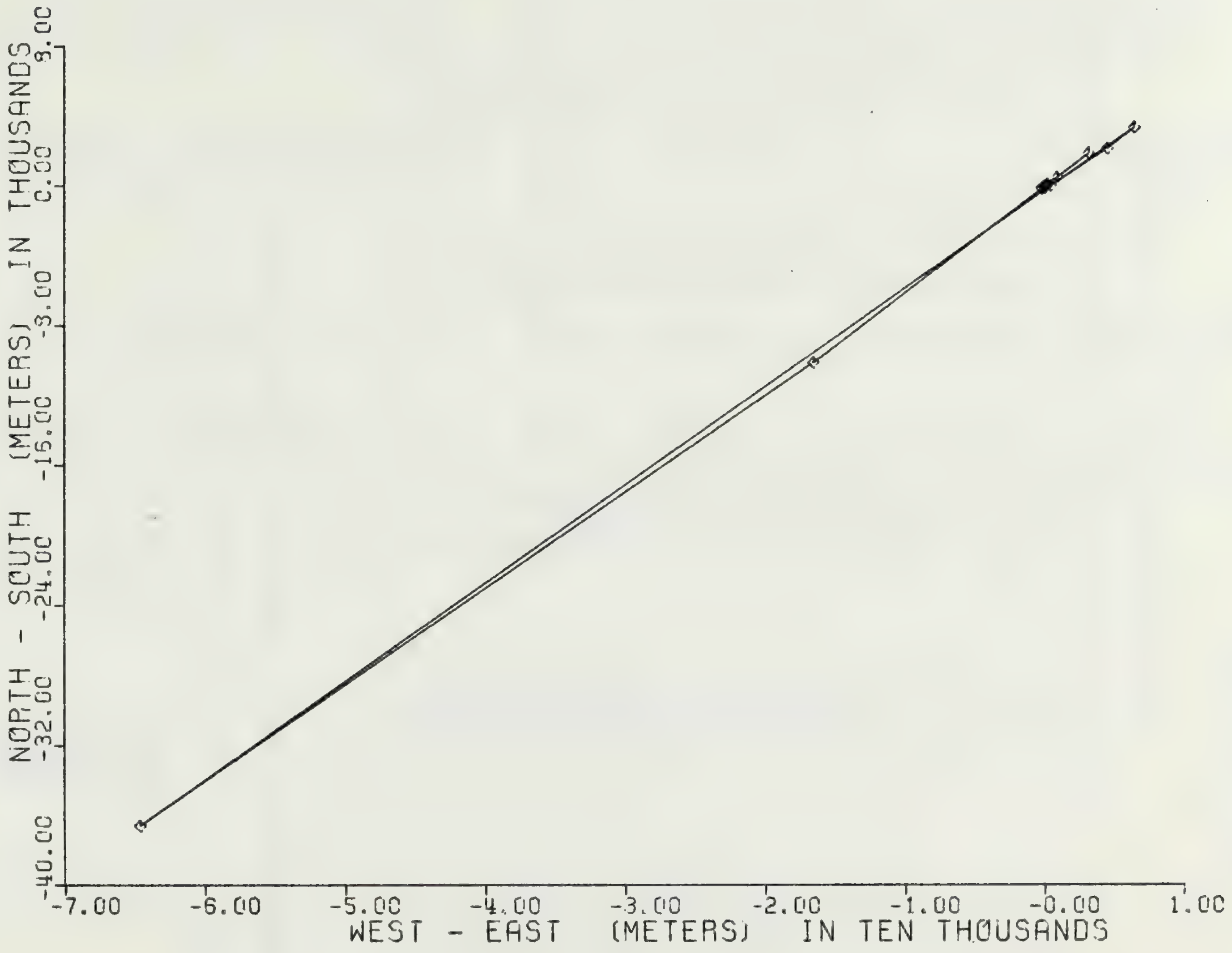


C-B PIBAL SOUNDING

TIME 1430   DATE 8/16/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-18-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1              THEODOLITE #2

  TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0            0.0        0.0           42.5       -0.1        0.0
  0.5          125.2       14.7           43.1        1.7        4.1
  1.0          123.3       50.7           44.8        4.2        4.4
  1.5          133.3       42.8           48.5        6.8        4.7
  2.0          138.8       35.2           52.7        8.4        4.6
  2.5          141.1       32.2           57.1       10.2        4.1
  3.0          144.0       31.6           61.3       12.4        3.6
  3.5          146.9       31.0           64.9       14.2        3.1
  4.0          149.3       31.8           68.1       16.3        2.7
  4.5          151.5       32.7           70.0       17.9        2.5
  5.0          155.6       34.1           72.0       19.7        2.2
  5.5          159.7       34.0           75.2       21.6        2.0
  6.0          162.4       35.5           79.0       23.9        1.7
  6.5          165.5       36.0           80.5       25.0        1.5
  7.0          164.1       36.0           82.0       25.9        1.2
  7.5          162.3       35.4           84.0       26.2        1.0
  8.0          162.0       35.0           86.0       26.7        0.7
  8.5          162.2       34.8           87.7       27.3        0.5
  9.0          162.0       34.9           89.0       27.9        0.2
  9.5          160.8       34.8           90.0       28.2        0.0
 10.0          159.2       34.3           90.7       28.1       -0.3
 10.5          154.3       34.3           90.0       27.5       -0.6
 11.0          150.9       33.1           88.8       26.9       -1.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME       RHO        ERROR

    1     133.0         4.3
    2      77.4         4.6
    3      85.3         4.9
    4      92.2         5.2
    5      84.7         5.5
    6      77.2         5.9
    7      73.1         6.1
    8      55.7         6.4
    9      42.5         6.6
   10       9.3         6.6
   11      40.9         6.8
   12     145.3         7.0
   13     202.3         7.0
   14     175.6         7.3
   15     162.4         7.6
   16     166.4         7.8
   17     170.3         8.0
```

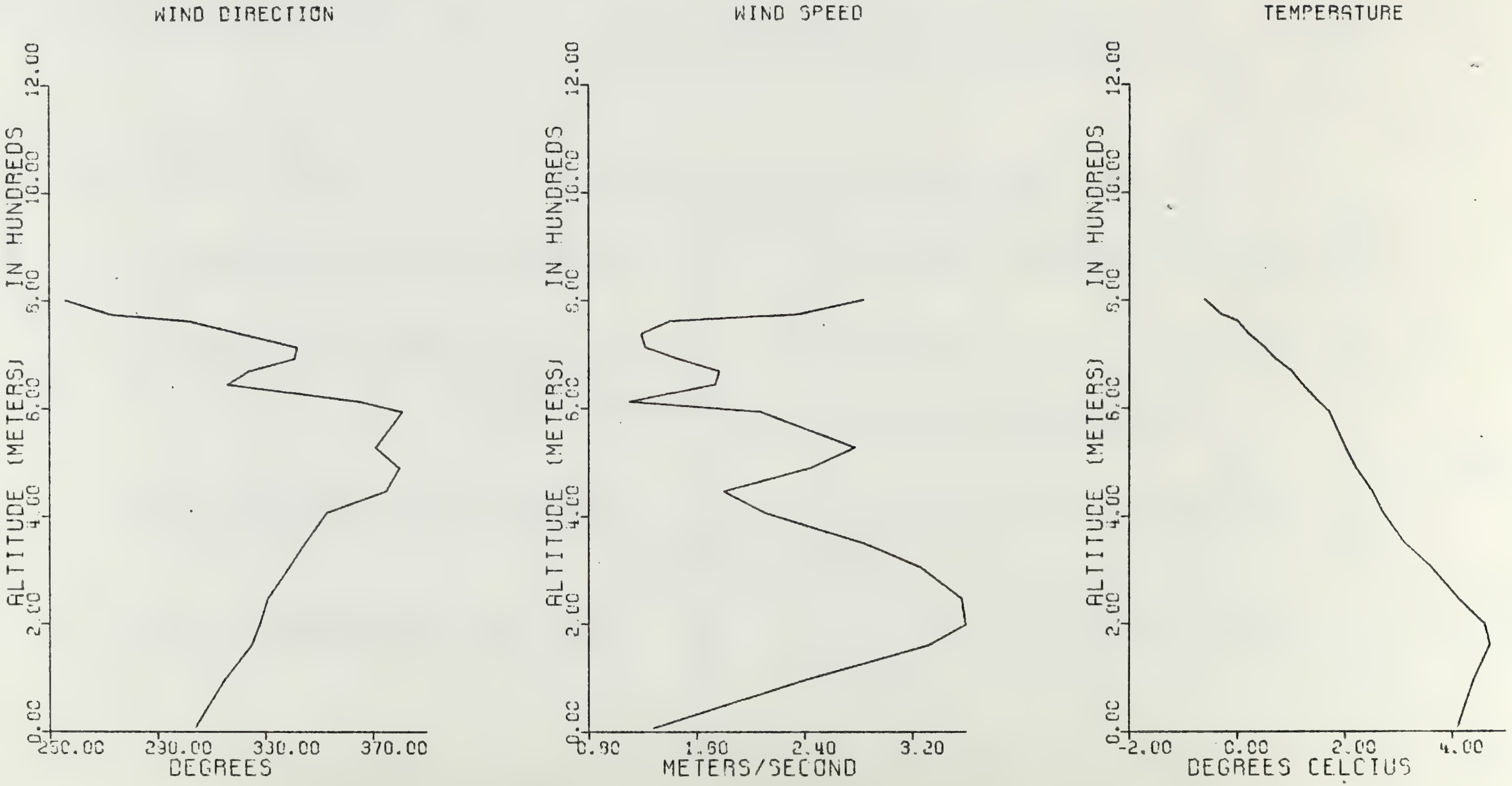
18	173.1	8.2
19	156.3	8.4
20	123.9	8.6
21	78.1	9.0
22	51.7	9.2

HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
25.	304.	4.2	4.1
319.	315.	7.9	4.4
529.	325.	10.9	4.7
653.	328.	11.8	4.6
811.	331.	11.7	4.1
1002.	339.	10.7	3.6
1152.	345.	9.3	3.1
1335.	353.	6.9	2.7
1466.	15.	5.9	2.5
1606.	20.	8.0	2.2
1731.	11.	9.1	2.0
1949.	21.	6.8	1.7
2011.	5.	3.6	1.5
2115.	316.	5.7	1.2
2196.	324.	5.8	1.0
2270.	341.	4.8	0.7
2341.	342.	4.0	0.5
2422.	321.	3.9	0.2
2499.	302.	4.6	0.0
2541.	273.	7.7	-0.3
2628.	256.	9.3	-0.6

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
7.	304.	1.3	4.1
97.	315.	2.4	4.4
161.	325.	3.3	4.7
199.	328.	3.6	4.6
247.	331.	3.6	4.1
306.	339.	3.3	3.6
351.	345.	2.8	3.1
407.	353.	2.1	2.7
447.	15.	1.8	2.5
489.	20.	2.4	2.2
528.	11.	2.8	2.0
594.	21.	2.1	1.7
613.	5.	1.1	1.5
645.	316.	1.7	1.2
669.	324.	1.8	1.0
692.	341.	1.5	0.7
713.	342.	1.2	0.5
738.	321.	1.2	0.2
762.	302.	1.4	0.0
775.	273.	2.3	-0.3
801.	256.	2.8	-0.6

C-B PIBAL SOUNDING

TIME 700 DATE 8/18/78

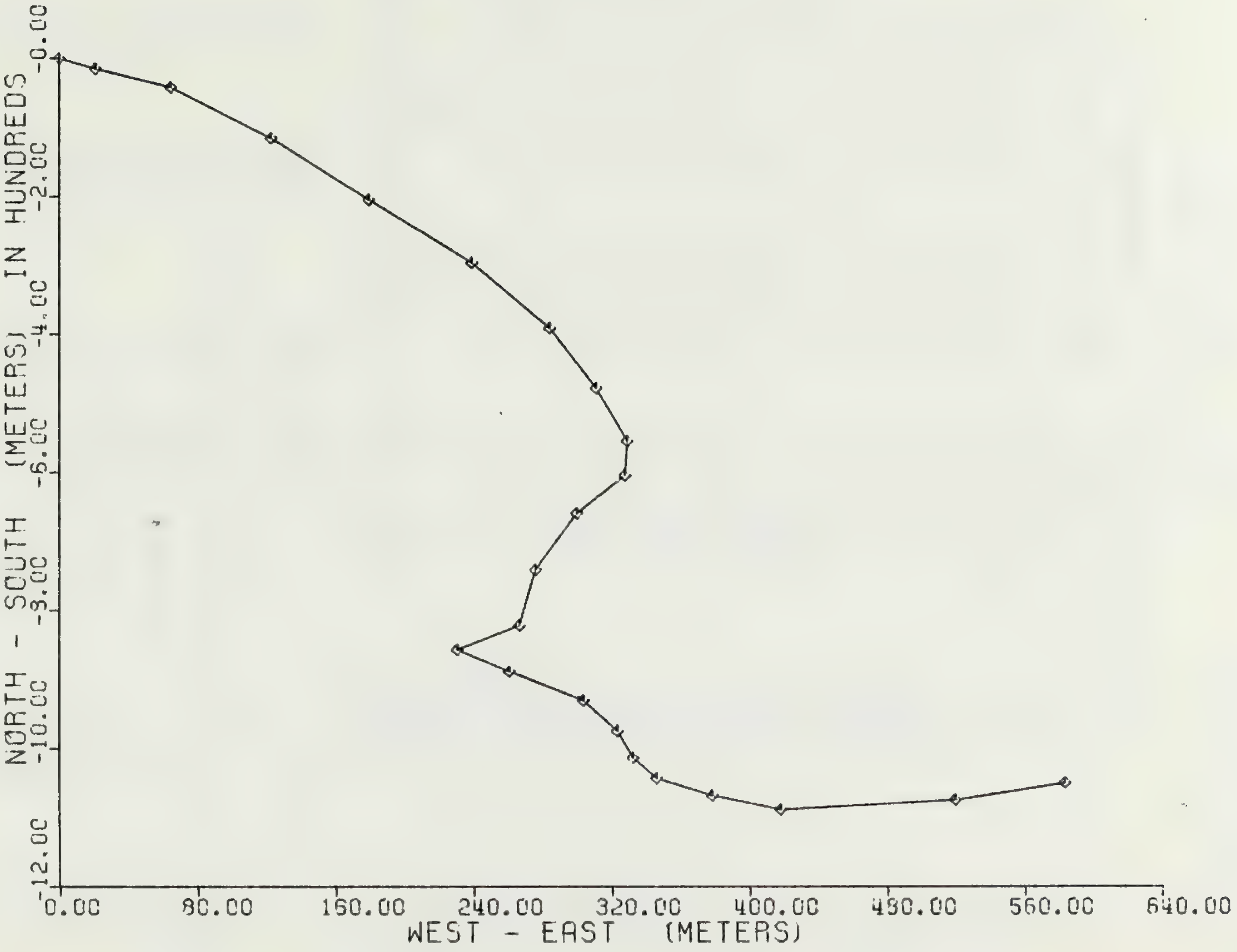


C-B PIBAL SOUNDING

TIME 700 DATE 8/18/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-18-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0          42.5       -0.1        0.0
   0.5          90.2       43.6          45.6        3.7       12.4
   1.0          99.9       48.5          49.0        8.4       11.3
   1.5         113.7       47.8          53.1       11.9       10.2
   2.0         115.0       50.2          55.9       16.5        9.0
   2.5         122.2       52.9          58.8       20.6        7.9
   3.0         130.2       50.9          62.5       22.9        6.8
   3.5         135.7       48.6          67.3       25.1        6.1
   4.0         139.5       46.7          71.7       27.4        5.7
   4.5         142.3       46.1          74.5       29.4        5.3
   5.0         144.1       47.1          76.1       31.4        4.9
   5.5         146.5       47.4          78.0       33.0        4.5
   6.0         146.1       47.7          80.3       35.0        4.1
   6.5         146.6       48.4          81.8       36.4        3.7
   7.0         145.9       49.1          83.1       37.7        3.3
   7.5         143.0       49.2          84.7       39.1        2.5
   8.0         141.6       49.1          85.4       38.6        1.8
   8.5         140.0       49.5          85.7       39.2        1.1
   9.0         138.5       49.6          86.4       39.6        0.4
   9.5         136.5       49.4          86.3       39.1       -0.2
  10.0         135.0       48.7          87.0       38.5       -1.0
  10.5         130.6       48.3          86.7       38.0       -1.1
  11.0         130.1       48.0          88.1       38.4       -1.3
  11.5         130.3       46.4          90.5       38.5       -1.5
  12.0         129.5       45.6          91.8       38.0       -1.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1      10.5        4.9
     2       8.4        5.5
     3       6.9        6.0
     4      20.1        6.7
     5       0.6        7.1
     6       9.0        7.4
     7      22.3        7.8
     8       5.9        8.3
     9      21.8        8.6
    10      13.8        8.9
    11       0.5        9.1
    12      29.7        9.7
    13      11.0       10.0
    14       7.1       10.5
    15      81.2       11.4
   16      14.2      11.6
   17      32.3      12.1
   18      36.6      12.6
   19      11.8      13.0
   20       8.2      13.2
   21       2.2      14.0
   22       2.4      14.7
   23      80.4      15.5
   24      38.7      16.2


          HEIGHT  DIRECTION  SPEED  TEMP
           FEET    DEGREES  FT/SEC DEG C

            341.    280.     11.6  12.4
            782.    306.     11.6  11.3
           1111.    311.     11.1  10.2
           1582.    319.      8.9   9.0
           1995.    344.     10.3   7.9
           2196.    343.     12.9   6.8
           2434.    340.     13.7   6.1
           2680.    345.     11.1   5.7
           2878.    355.      6.8   5.3
           3099.      5.      5.3   4.9
           3261.    342.      6.4   4.5
           3577.    328.      6.1   4.1
           3799.    324.      4.7   3.7
           4065.    299.      8.4   3.3
           4479.    291.      8.4   2.5
           4558.    281.      5.3   1.8
           4777.    284.      6.1   1.1
           5001.    281.      7.1   0.4
           5120.    275.      6.6  -0.2
           5149.    265.     10.7  -1.0
           5419.    279.     12.1  -1.1
           5694.    309.     13.0  -1.3
           5945.    306.     14.1  -1.5


          HEIGHT  DIRECTION  SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

            104.    280.      3.5  12.4
            238.    306.      3.5  11.3
            339.    311.      3.4  10.2
            482.    319.      2.7   9.0
            608.    344.      3.1   7.9
            669.    343.      3.9   6.8
            742.    340.      4.2   6.1
            817.    345.      3.4   5.7
            877.    355.      2.1   5.3
            945.      5.      1.6   4.9
            994.    342.      2.0   4.5
           1090.    328.      1.9   4.1
           1158.    324.      1.4   3.7
           1239.    299.      2.6   3.3
           1365.    291.      2.6   2.5
           1389.    281.      1.6   1.8
           1456.    284.      1.9   1.1
           1524.    281.      2.2   0.4
           1560.    275.      2.0  -0.2
           1569.    265.      3.3  -1.0
           1652.    279.      3.7  -1.1
           1736.    309.      4.0  -1.3
           1812.    306.      4.3  -1.5
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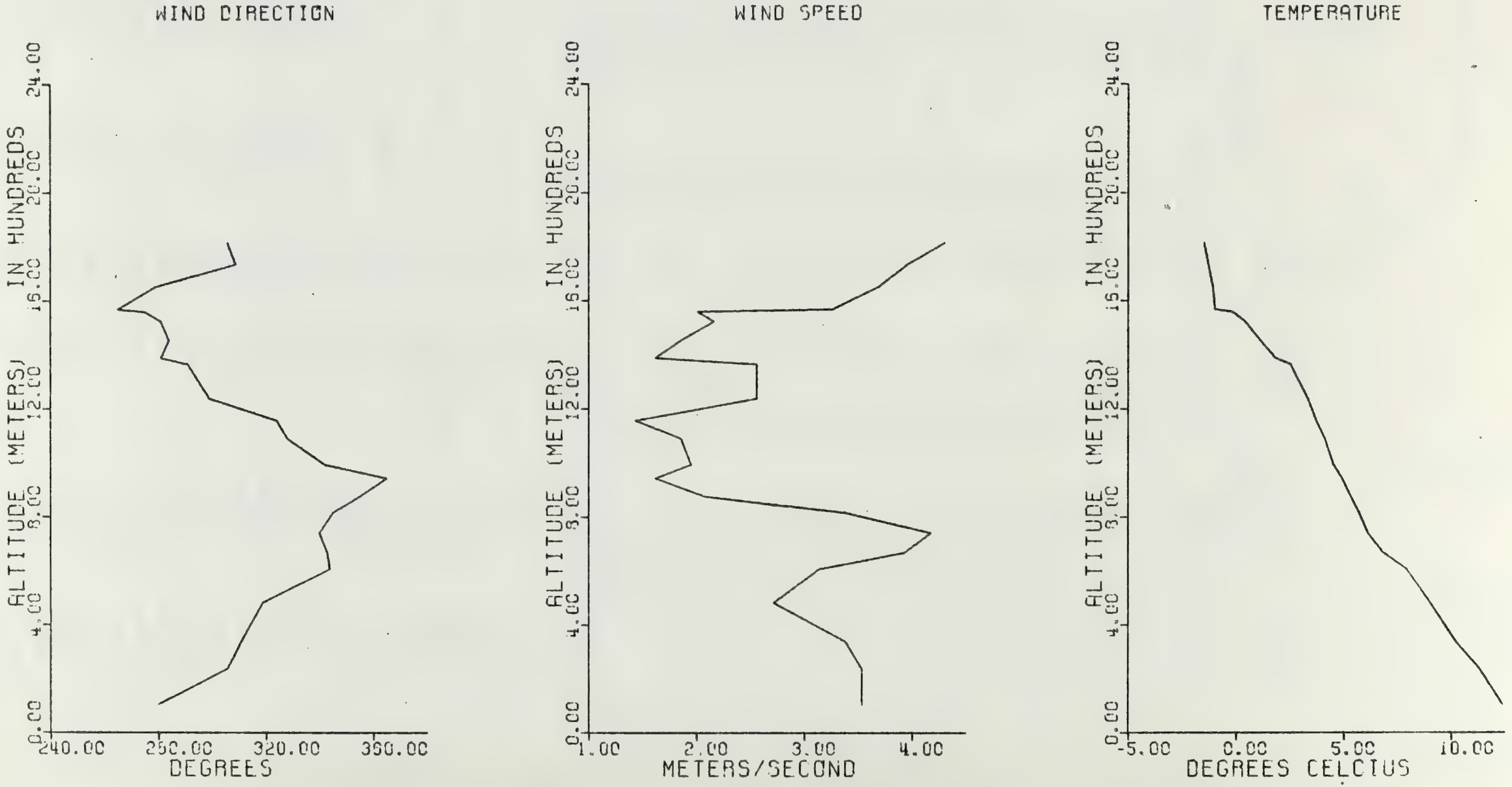
C-B PIBAL SOUNDING

TIME 1330   DATE 8/18/78

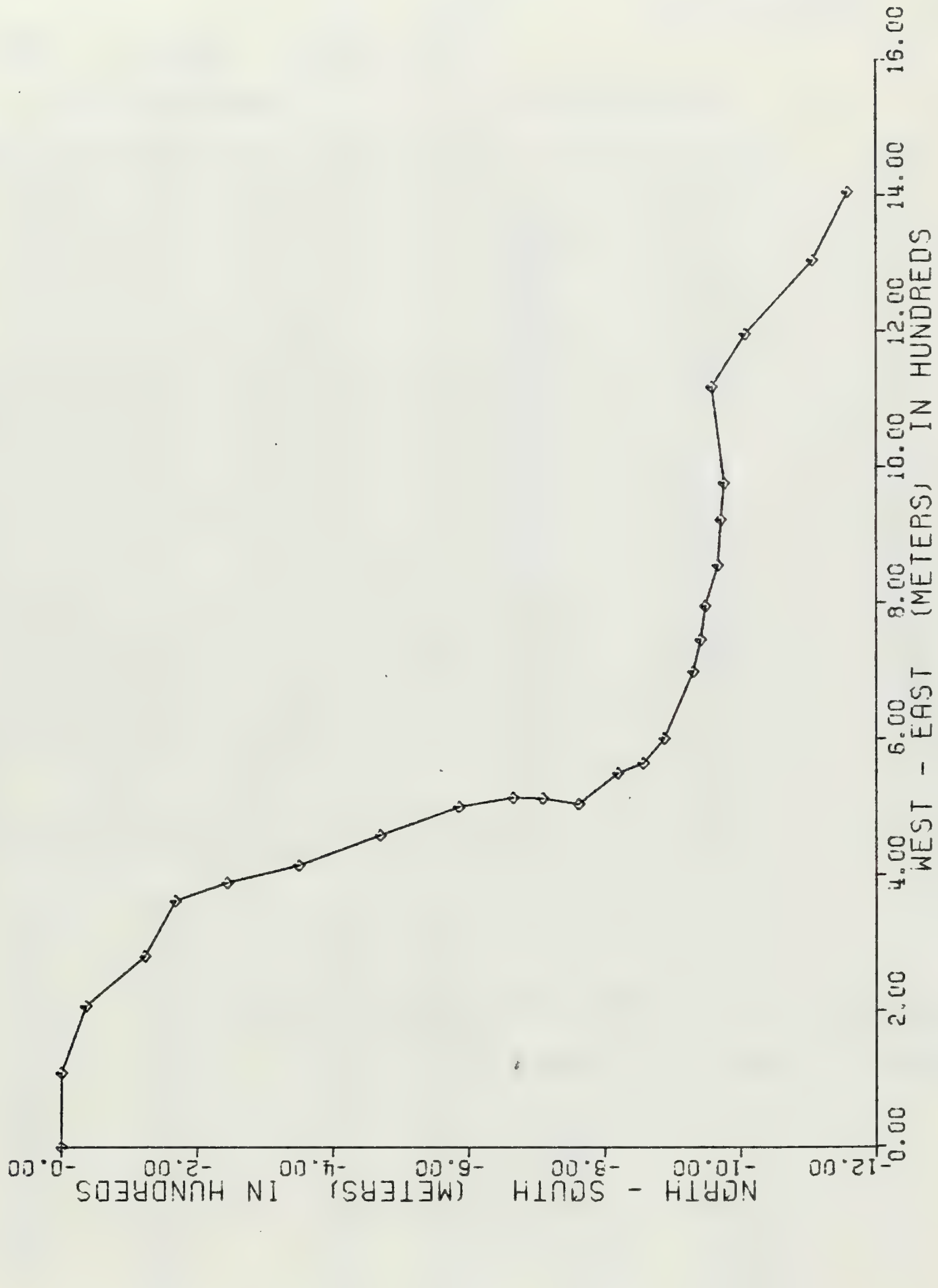


C-B PIBAL SOUNDING

TIME 1330 DATE 8/18/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-21-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1        0.0
   0.5         267.1       28.5           38.1        2.7       16.6
   1.0         272.2       26.5           33.9        5.4       17.8
   1.5         274.2       36.5           33.8        8.7       19.0
   2.0         285.0       48.9           33.1       12.0       18.9
   2.5         310.0       54.2           31.9       13.9       13.8
   3.0         735.7       45.8           28.4       14.0       18.8
   3.5         358.3       35.8           26.2       13.9       18.3
   4.0         359.9       30.8           25.0       13.8       17.9
   4.5           2.9       27.4           25.6       14.0       17.4
   5.0          11.0       25.6           26.4       14.1       17.0
   5.5          16.0       23.4           27.3       14.0       16.3
   6.0          19.5       22.0           28.9       14.1       15.7
   6.5          23.5       21.6           30.5       14.3       15.1
   7.0          26.4       21.4           32.3       14.5       14.5
   7.5          29.5       20.9           33.8       14.6       13.8
   8.0          32.0       20.6           35.2       14.8       13.2
   8.5          33.5       20.5           36.5       14.9       12.6
   9.0          35.2       19.9           37.5       14.9       12.0
   9.5          36.7       19.8           38.4       15.0       11.3
  10.0          38.8       19.6           39.1       15.0       10.6
  10.5          39.0       19.0           39.8       14.7       10.0
  11.0          40.1       18.9           40.7       14.9        9.3
  11.5          41.1       18.7           41.4       15.0        8.7
  12.0          42.0       18.5           42.1       15.0        8.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      36.9       4.4
     2       4.9       4.6
     3      38.5       4.8
     4       9.0       5.1
     5      17.5       5.7
     6     809.7       8.0
     7     200.8       9.0
     8     102.7      10.1
     9      86.9      10.9
    10      15.7      13.3
    11      32.8      15.7
    12      71.4      17.4
    13      22.0      19.5
    14      69.8      20.4
    15      31.9      22.7
  16      18.3        24.9
  17     104.4        25.2
  18     106.7        27.9
  19      68.6        29.5
  20     207.7        31.5
  21      10.4        32.6
  22      25.3        35.0
  23       3.9        37.8
  24       0.4        39.8


          HEIGHT   DIRECTION    SPEED   TEMP
           FEET     DEGREES    FT/SEC  DEG C

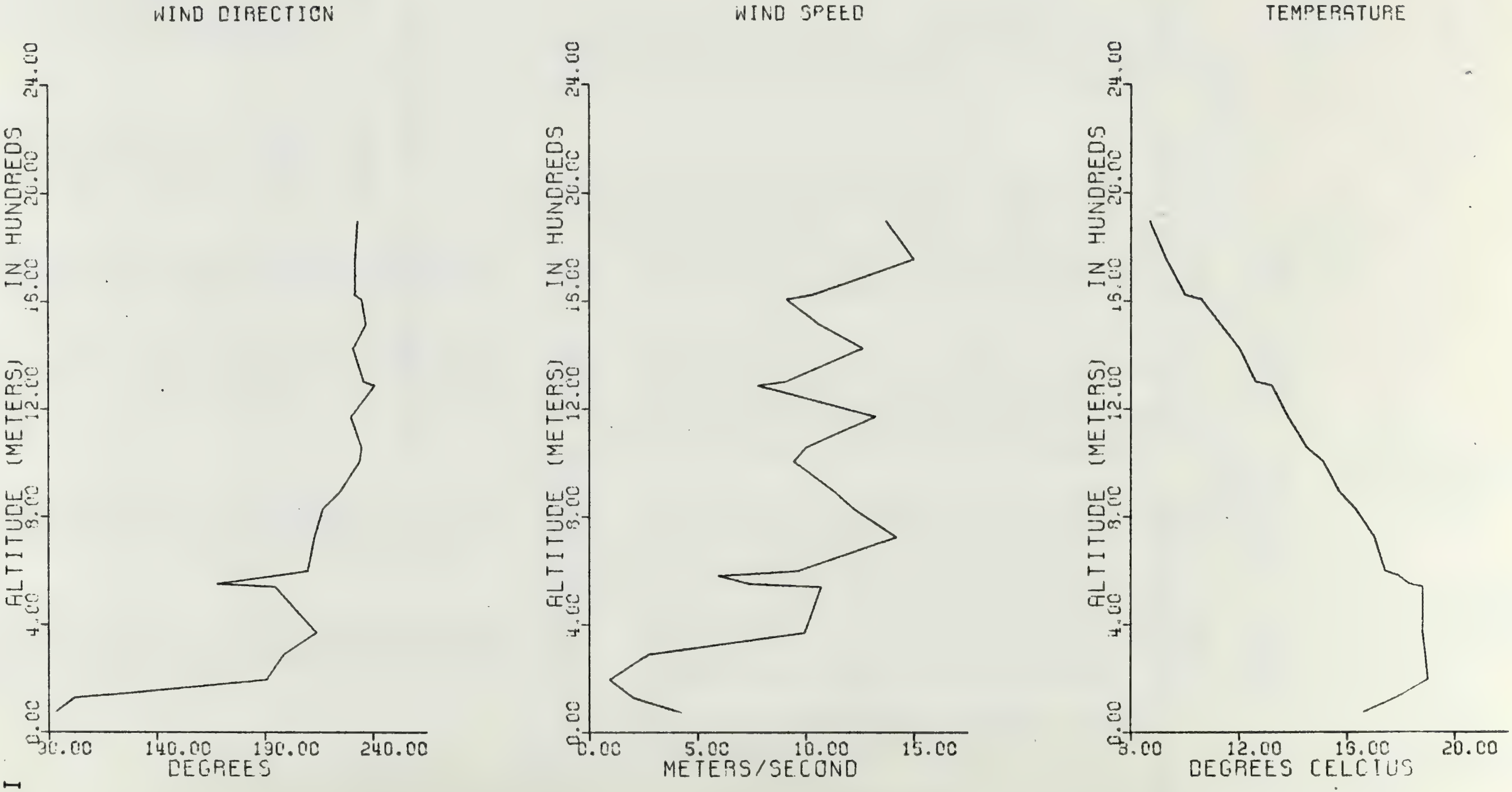
            246.       93.       14.0   16.6
            419.      102.        6.8   17.8
            646.      191.        3.1   19.0
            956.      199.        9.0   18.9
           1216.      214.       32.7   18.8
           1775.      195.       35.2   18.8
           1813.      168.       24.4   18.3
           1911.      195.       19.6   17.9
           1967.      210.       31.6   17.4
           2381.      213.       46.6   17.0
           2724.      217.       40.1   16.3
           2934.      225.       37.2   15.7
           3304.      234.       31.0   15.1
           3469.      235.       32.8   14.5
           3845.      230.       43.4   13.8
           4224.      241.       25.5   13.2
           4274.      236.       29.8   12.6
           4678.      231.       41.5   12.0
           4967.      237.       34.8   11.3
           5272.      235.       29.9   10.6
           5327.      232.       33.8   10.0
           5753.      232.       49.2    9.3
           6213.      233.       45.0    8.7


          HEIGHT   DIRECTION    SPEED   TEMP
          METERS    DEGREES     M/SEC  DEG C

             75.       93.        4.3   16.6
            128.      102.        2.1   17.8
            197.      191.        0.9   19.0
            291.      199.        2.7   18.9
            371.      214.       10.0   18.8
            541.      195.       10.7   18.8
            553.      168.        7.4   18.3
            583.      195.        6.0   17.9
            600.      210.        9.6   17.4
            726.      213.       14.2   17.0
            830.      217.       12.2   16.3
            894.      225.       11.3   15.7
           1007.      234.        9.4   15.1
           1057.      235.       10.0   14.5
           1172.      230.       13.2   13.8
           1287.      241.        7.8   13.2
           1303.      236.        9.1   12.6
           1426.      231.       12.6   12.0
           1514.      237.       10.6   11.3
           1607.      235.        9.1   10.6
           1624.      232.       10.3   10.0
           1754.      232.       15.0    9.3
```

C-B PIBAL SOUNDING

TIME 700 DATE 8/21/78

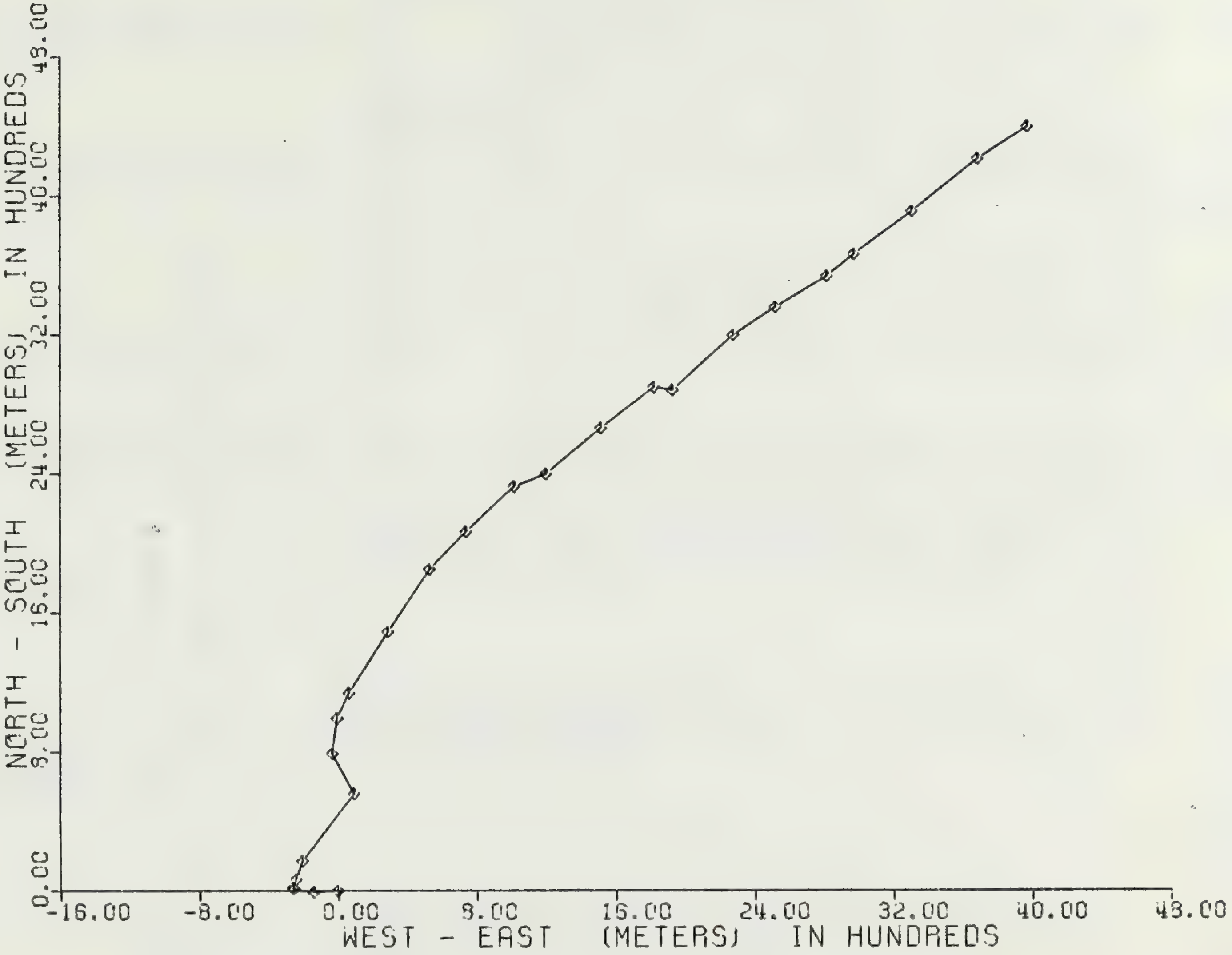


C-B PIBAL SOUNDING

TIME 700 DATE 8/21/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-21-78

BALLOON RELEASED 1400 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                   THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1         0.0
   0.5           11.6       22.1            38.6        1.7        24.7
   1.0           11.0       22.9            35.0        3.6        24.2
   1.5           10.2       22.1            32.6        4.3        23.7
   2.0            9.5       23.4            29.5        5.0        23.2
   2.5            9.3       24.7            27.5        5.5        22.7
   3.0            8.9       24.8            26.2        5.8        22.2
   3.5            8.4       24.8            25.2        5.8        21.7
   4.0            7.9       24.9            24.6        5.8        21.2
   4.5            7.5       25.0            23.2        5.8        20.7
   5.0            7.4       25.1            22.4        5.8        20.2
   5.5            8.0       25.5            21.5        6.6        19.0
   6.0            8.4       26.1            20.8        7.3        17.9
   6.5            9.6       26.0            20.4        8.0        16.8
   7.0           10.2       26.1            20.3        8.6        15.6
   7.5           10.7       26.1            20.0        9.1        14.5
   8.0           11.3       26.4            20.1        9.8        13.7
   8.5           11.4       25.0            20.3        9.8        13.1
   9.0           11.4       24.8            20.3        9.9        12.5
   9.5           11.4       24.5            20.2        9.9        11.9
  10.0           11.5       24.3            19.9       10.1        11.3
  10.5           11.6       24.3            19.9       10.3        10.7
  11.0           11.8       24.3            19.7       10.4        10.1
  11.5           11.9       24.2            20.1       10.6         9.5
  12.0           11.7       24.0            20.2       10.3         9.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME         RHO          ERROR

     1         94.3          5.2
     2        189.6          6.3
     3        273.6          7.1
     4        481.0          7.9
     5        653.1          8.4
     6        743.1          8.8
     7        823.9          9.0
     8        869.5          9.0
     9       1000.7          9.3
    10       1084.3          9.4
    11       1163.3          9.8
    12       1234.0         10.1
    13       1291.0         10.6
    14       1299.8         11.0
    15       1334.8         11.3
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16	1323.9	11.7
17	1244.4	12.5
18	1227.4	12.8
19	1227.3	13.0
20	1252.4	13.4
21	1243.9	13.6
22	1281.6	13.7
23	1207.5	14.0
24	1191.3	13.8

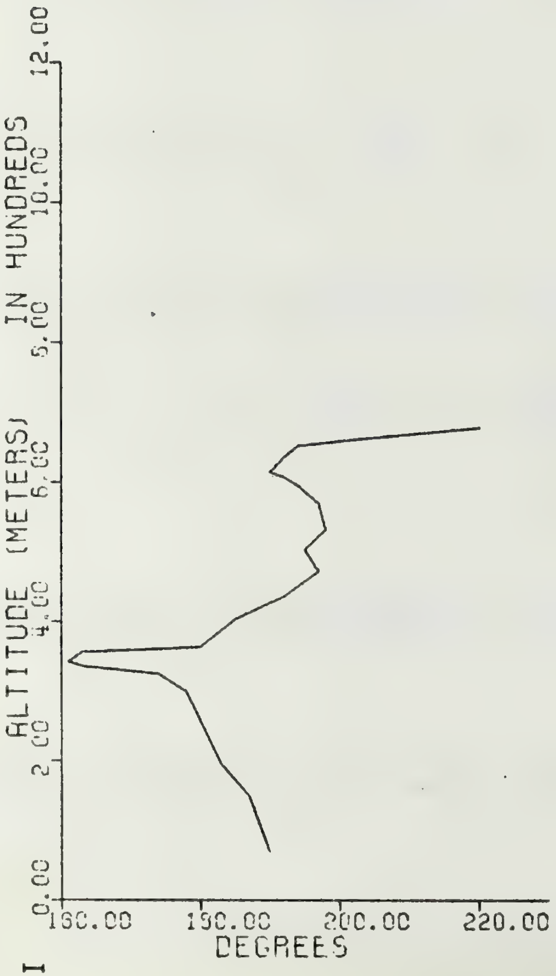
HEIGHT FEET	DIRECTION DEGREES	SPEED FT/SEC	TEMP DEG C
230.	190.	20.7	24.7
494.	187.	18.7	24.2
642.	183.	15.9	23.7
846.	180.	12.3	23.2
983.	178.	8.0	22.7
1068.	174.	5.8	22.2
1105.	163.	3.1	21.7
1124.	161.	3.6	21.2
1171.	163.	3.7	20.7
1194.	180.	5.2	20.2
1323.	185.	6.6	19.0
1431.	192.	6.9	17.9
1549.	197.	7.7	16.8
1651.	195.	6.5	15.6
1746.	198.	6.5	14.5
1868.	197.	11.1	13.7
1954.	194.	10.1	13.1
1992.	192.	4.2	12.5
2015.	190.	5.6	11.9
2085.	192.	5.5	11.3
2138.	194.	2.9	10.7
2164.	201.	3.5	10.1
2222.	220.	1.0	9.5

HEIGHT METERS	DIRECTION DEGREES	SPEED M/SEC	TEMP DEG C
70.	190.	6.3	24.7
151.	187.	5.7	24.2
196.	183.	4.8	23.7
258.	180.	3.7	23.2
300.	178.	2.4	22.7
326.	174.	1.8	22.2
337.	163.	0.9	21.7
343.	161.	1.1	21.2
357.	163.	1.1	20.7
364.	180.	1.6	20.2
403.	185.	2.0	19.0
436.	192.	2.1	17.9
472.	197.	2.3	16.8
503.	195.	2.0	15.6
532.	198.	2.0	14.5
569.	197.	3.4	13.7
596.	194.	3.1	13.1
607.	192.	1.3	12.5
614.	190.	1.7	11.9
636.	192.	1.7	11.3
652.	194.	0.9	10.7
660.	201.	1.1	10.1
677.	220.	0.3	9.5

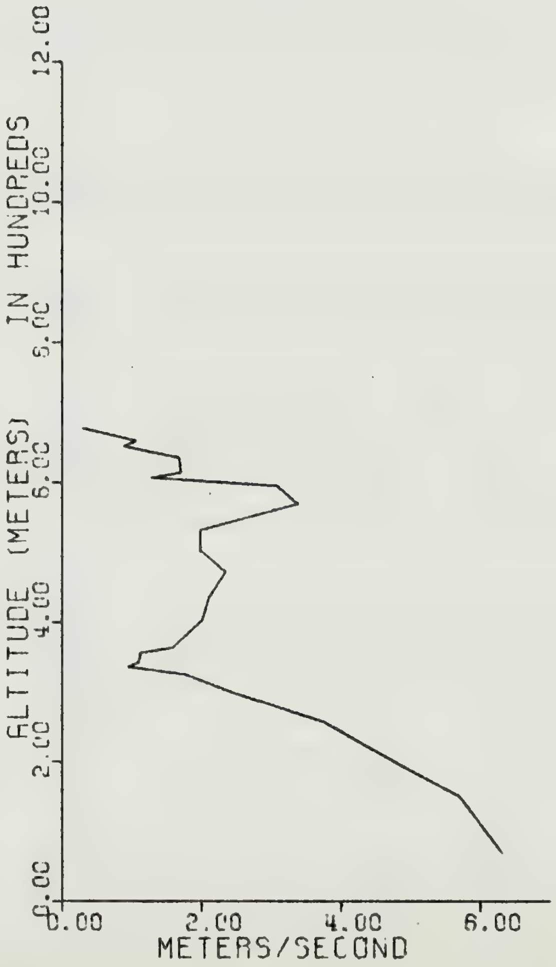
C-B PIBAL SOUNDING

TIME 1400 DATE 8/21/78

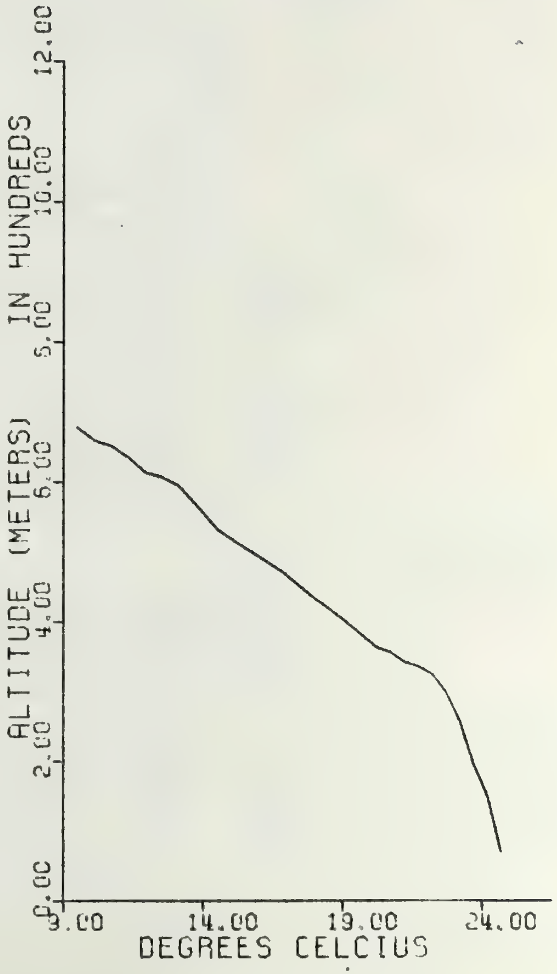
WIND DIRECTION



WIND SPEED



TEMPERATURE

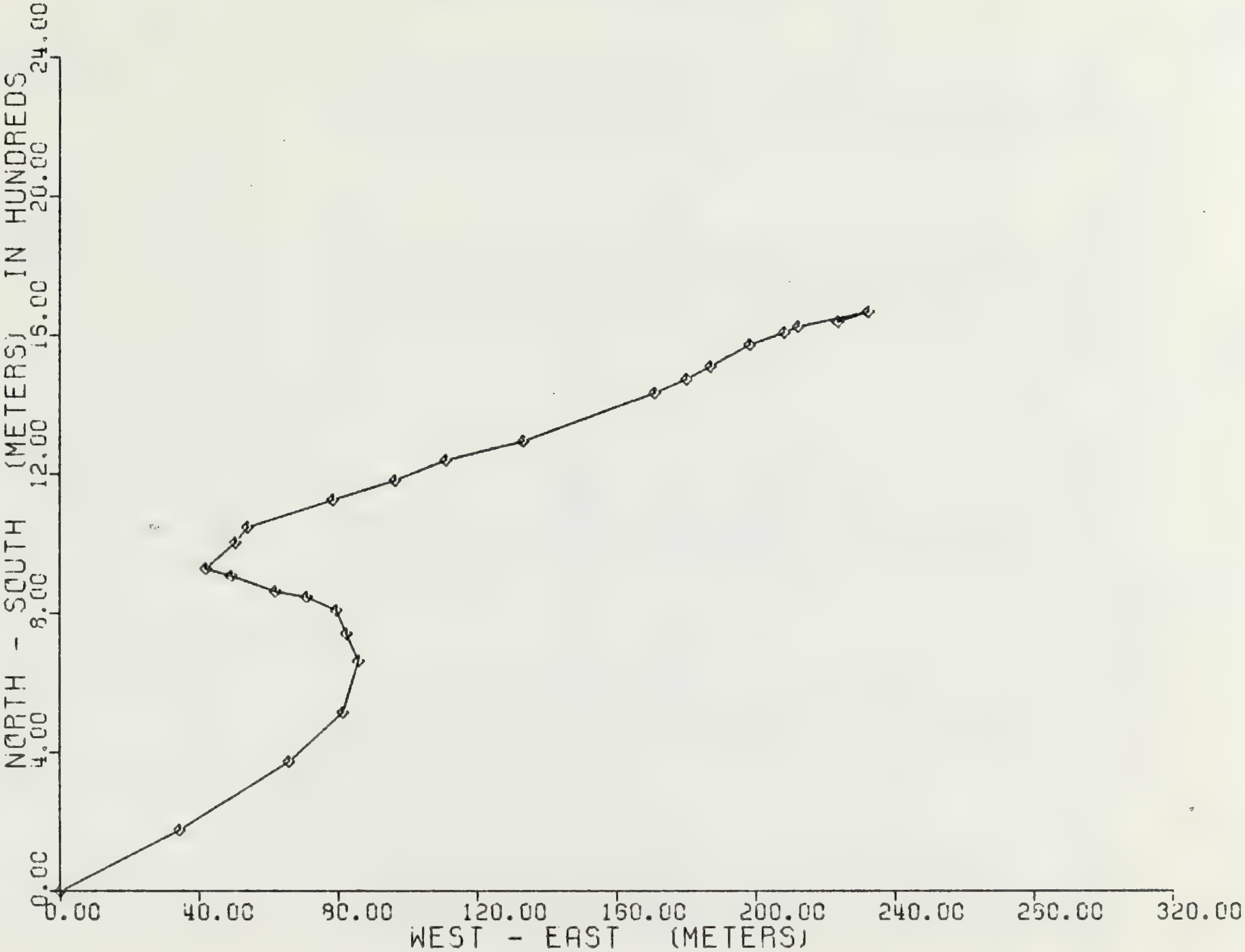


C-B PIBAL SOUNDING

TIME 1400   DATE 8/21/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 0700 DATE: 8/22/78

BALLOON LAUNCH RAINED OUT.

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C-B PIBAL SOUNDING

SOUNDING DATE  8-22-78                              ** SUSPECT DATA **

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1            THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1        0.0
   0.5          29.1       13.6           40.4        2.2       24.3
   1.0          21.1       20.6           37.8        5.6       22.9
   1.5          19.8       26.4           35.6        8.9       22.0
   2.0          16.6       27.6           32.7       11.4       21.5
   2.5          13.3       24.7           29.0       12.2       21.0
   3.0          13.5       22.2           28.3       12.0       20.6
   3.5          14.0       19.8           27.4       11.7       19.7
   4.0          15.5       20.3           27.4       12.4       18.9
   4.5          18.3       20.7           28.4       13.4       18.0
   5.0          18.9       21.3           28.4       14.2       17.2
   5.5          19.7       21.3           28.7       14.9       16.9
   6.0          21.6       20.1           28.9       14.7       16.6
   6.5          23.5       19.6           29.4       14.5       16.3
   7.0          24.1       18.7           29.3       14.2       16.0
   7.5          23.6       18.0           28.9       14.0       15.7
   8.0          23.2       17.3           28.1       13.8       15.4
   8.5          22.8       16.8           27.0       13.0       15.1
   9.0          22.5       14.8           26.9       12.2       14.8
   9.5          22.6       13.8           26.7       11.7       14.6
  10.0          23.1       13.7           27.0       11.6       14.4
  10.5          23.5       13.3           27.2       11.5       14.2
  11.0          23.9       12.7           27.3       11.3       14.0
  11.5          24.3       12.5           27.3       11.0       13.8
  12.0          24.2       12.3           27.3       10.5       13.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1         6.2        5.8
     2        65.0        6.9
     3        13.6        8.1
     4         4.9        9.6
     5        18.5       11.6
     6        48.9       12.7
     7        91.3       14.2
     8        69.7       15.4
     9       123.0       17.1
    10       143.7       18.1
    11       242.1       19.3
    12       220.8       22.4
    13       121.3       25.0
    14       103.0       27.6
    15       177.4       28.5
  16      168.2        31.6
  17      126.6        33.6
  18      157.3        36.2
  19      216.4        39.3
  20      190.1        40.3
  21      258.2        42.4
  22      346.6        46.0
  23      213.9        50.3
  24       83.3        47.0


          HEIGHT  DIRECTION   SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

            223.     201.       25.4  24.3
            584.     193.       21.0  22.9
           1074.     191.       23.7  22.0
           1534.     186.       32.9  21.5
           1881.     188.       30.0  21.0
           1944.     196.       25.2  20.6
           2050.     201.       25.8  19.7
           2340.     214.       26.0  18.9
           2723.     214.       23.9  18.0
           3023.     209.       19.6  17.2
           3303.     210.       39.4  16.9
           3721.     212.       53.2  16.6
           4095.     212.       49.1  16.3
           4390.     204.       33.9  16.0
           4423.     198.       38.4  15.7
           4784.     197.       49.1  15.4
           4893.     198.       45.9  15.1
           4793.     203.       55.9  14.8
           4929.     207.       38.8  14.6
           5008.     213.       29.3  14.4
           5174.     209.       54.9  14.2
           5448.     208.       75.2  14.0
           5838.     212.        9.7  13.8


          HEIGHT  DIRECTION   SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

             68.     201.        7.7  24.3
            178.     193.        6.4  22.9
            327.     191.        7.2  22.0
            467.     186.       10.0  21.5
            573.     188.        9.1  21.0
            593.     196.        7.7  20.6
            625.     201.        7.9  19.7
            713.     214.        7.9  18.9
            830.     214.        7.3  18.0
            921.     209.        6.0  17.2
           1007.     210.       12.0  16.9
           1134.     212.       16.2  16.6
           1248.     212.       15.0  16.3
           1338.     204.       10.3  16.0
           1348.     198.       11.7  15.7
           1458.     197.       15.0  15.4
           1491.     198.       14.0  15.1
           1461.     203.       17.0  14.8
           1502.     207.       11.8  14.6
           1527.     213.        8.9  14.4
           1577.     209.       16.7  14.2
           1660.     208.       22.9  14.0
           1779.     212.        3.0  13.8
```
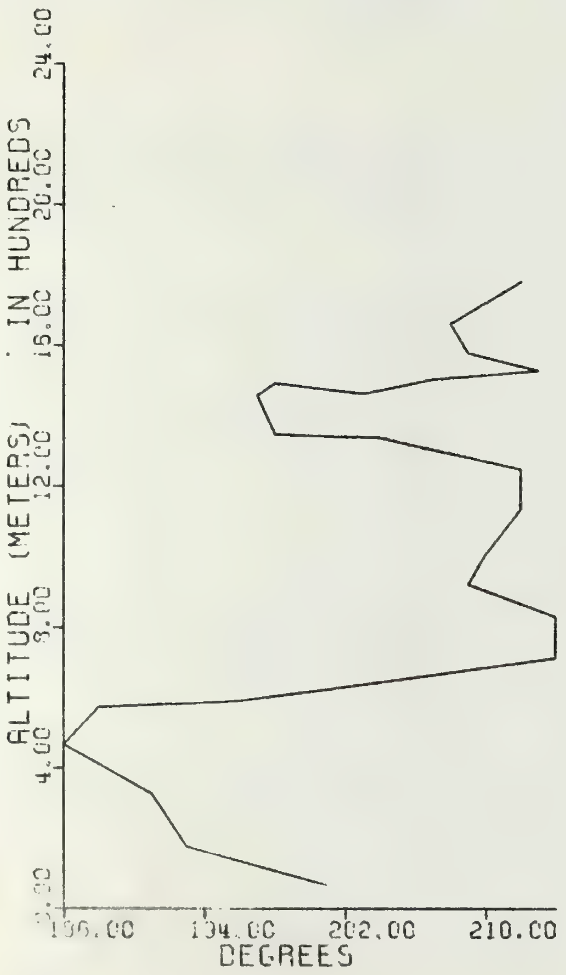
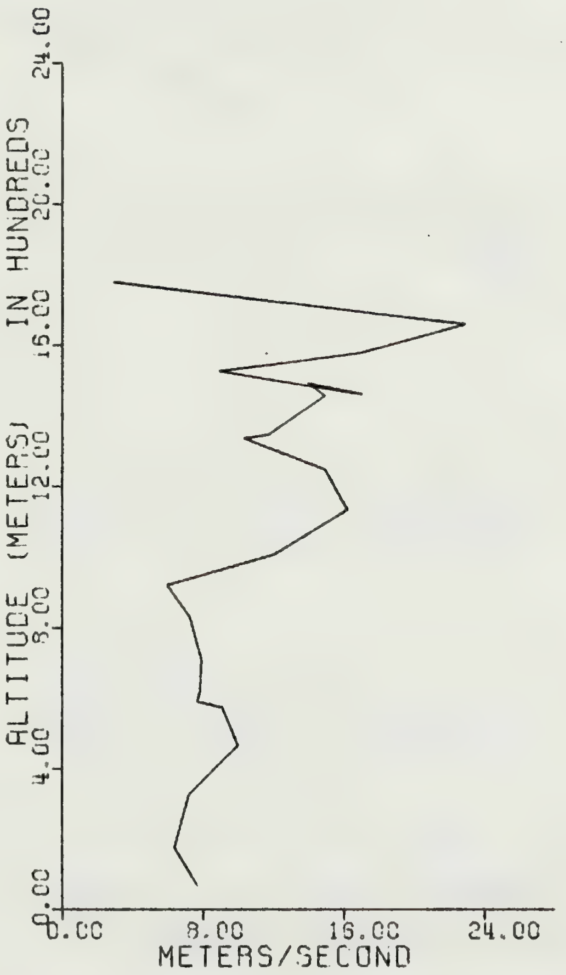

C-B PIBAL SOUNDING

TIME 1330 DATE 8/22/78

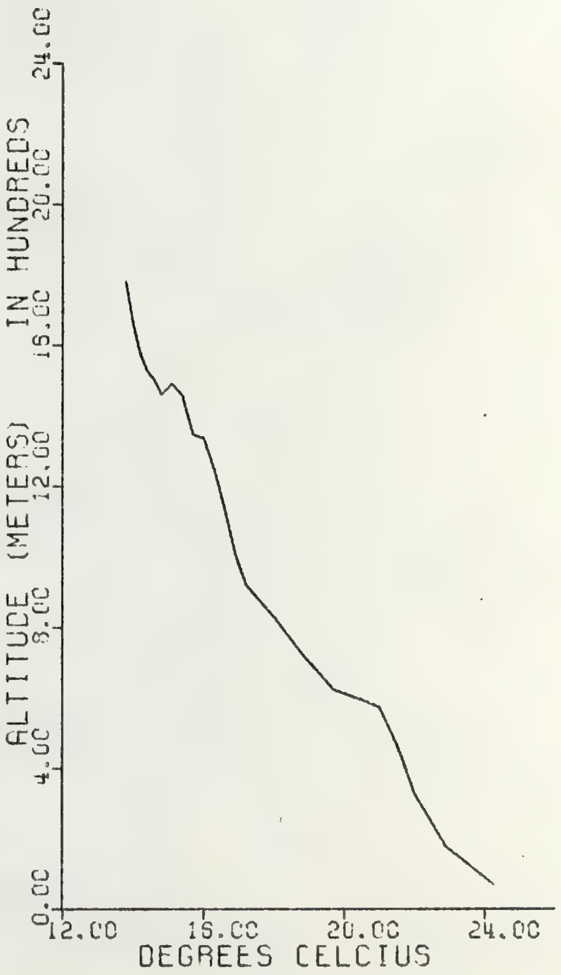
WIND DIRECTION



WIND SPEED



TEMPERATURE

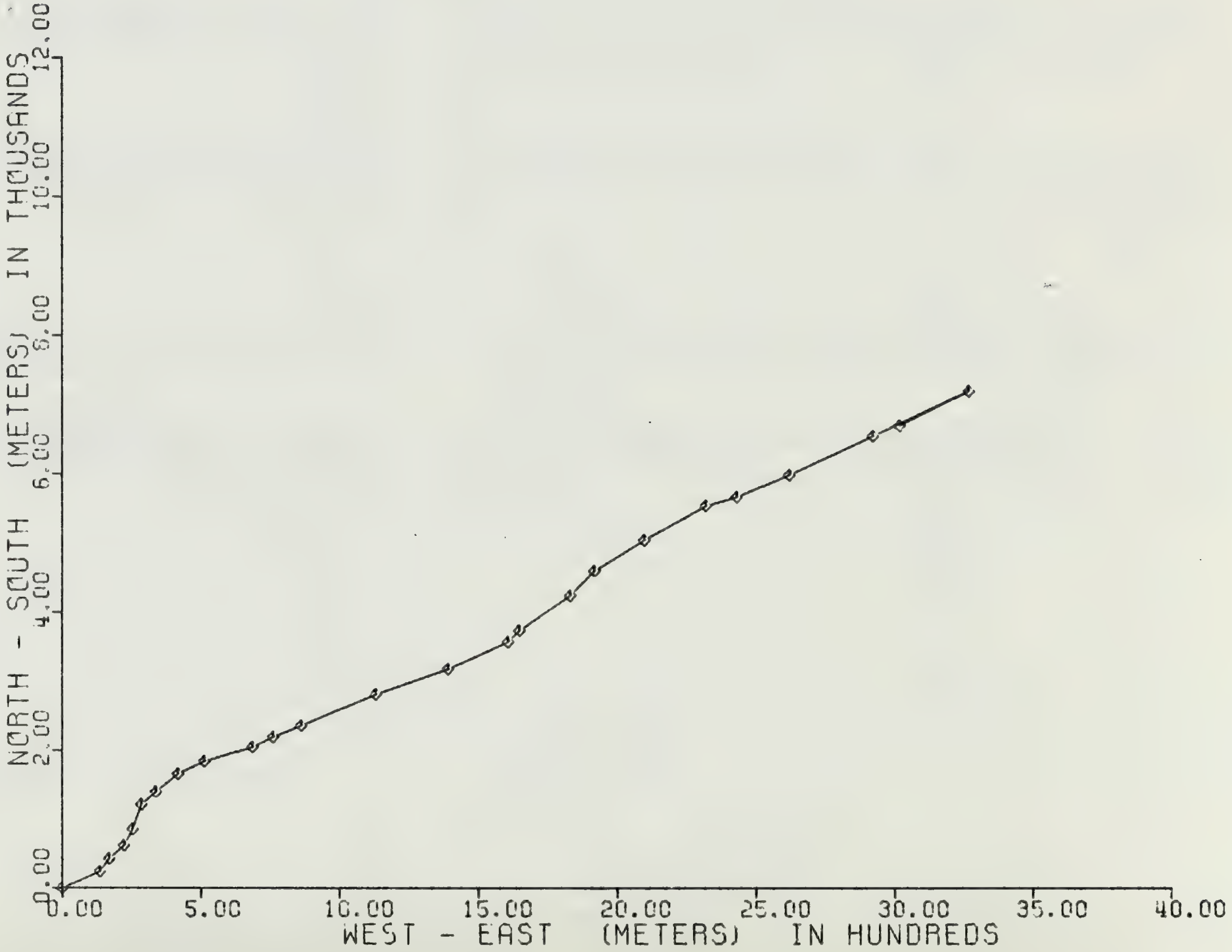


C-B PIBAL SOUNDING

TIME 1330   DATE 8/22/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-24-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1        0.0
   0.5         292.2       59.5           40.4        2.9       11.4
   1.0         341.2       33.5           35.6        4.8       12.2
   1.5         348.3       22.5           28.6        6.8       13.1
   2.0         352.3       20.3           24.5        8.3       14.0
   2.5         356.5       18.8           22.2        9.2       13.6
   3.0         359.6       17.8           21.3        9.9       13.2
   3.5           2.9       17.8           21.1       10.4       12.9
   4.0           4.7       17.8           21.1       10.9       12.5
   4.5           6.2       18.0           21.2       10.5       12.2
   5.0           7.7       18.2           21.3       12.0       11.8
   5.5           9.1       18.4           21.8       12.5       11.5
   6.0          11.5       18.5           22.5       12.9       11.1
   6.5          12.9       18.7           23.0       13.3       10.6
   7.0          14.6       18.7           23.5       13.6       10.0
   7.5          16.0       18.5           24.1       13.7        9.4
   8.0          17.2       18.3           24.6       13.9        8.7
   8.5          18.1       18.2           25.0       14.1        8.1
   9.0          18.7       18.1           25.1       14.2        7.5
   9.5          19.1       18.0           25.1       14.4        6.8
  10.0          19.3       17.9           24.9       14.4        6.2
  10.5          19.4       17.9           24.7       14.5        5.6
  11.0          19.4       17.7           24.5       14.5        5.0
  11.5          19.2       17.6           24.1       14.5        4.6
  12.0          18.9       17.4           23.7       14.4        4.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       32.1        4.4
     2       21.2        5.3
     3       11.3        7.0
     4       10.9        8.7
     5        8.8       10.6
     6       39.1       12.2
     7        5.0       13.9
     8       20.4       15.0
     9      125.7       15.5
    10       50.0       17.4
    11       91.3       18.2
    12       82.2       19.9
    13       93.5       21.0
    14       83.5       22.9
    15       94.5       24.2
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16     131.8     25.8
17     166.4     27.2
18     159.2     28.9
19     186.3     30.8
20     144.5     32.6
21     119.7     34.3
22     130.1     35.9
23     104.1     37.5
24      89.8     38.7

     HEIGHT  DIRECTION   SPEED   TEMP
      FEET    DEGREES    FT/SEC  DEG C

       263.     162.      11.6   11.4
       457.     173.      28.2   12.2
       733.     176.      35.0   13.1
      1024.     183.      34.9   14.0
      1303.     189.      33.5   13.6
      1534.     196.      30.9   13.2
      1806.     200.      26.3   12.9
      2010.     204.      16.0   12.5
      2073.     202.      21.6   12.2
      2478.     203.      24.0   11.8
      2665.     211.      24.0   11.5
      2980.     212.      26.7   11.1
      3219.     211.      27.6   10.6
      3548.     212.      30.0   10.0
      3755.     213.      28.3    9.4
      4021.     212.      28.3    8.7
      4258.     209.      28.1    8.1
      4525.     205.      32.5    7.5
      4846.     203.      34.1    6.8
      5126.     201.      32.2    6.2
      5415.     200.      30.1    5.6
      5637.     197.      30.1    5.0
      5886.     193.      26.6    4.6

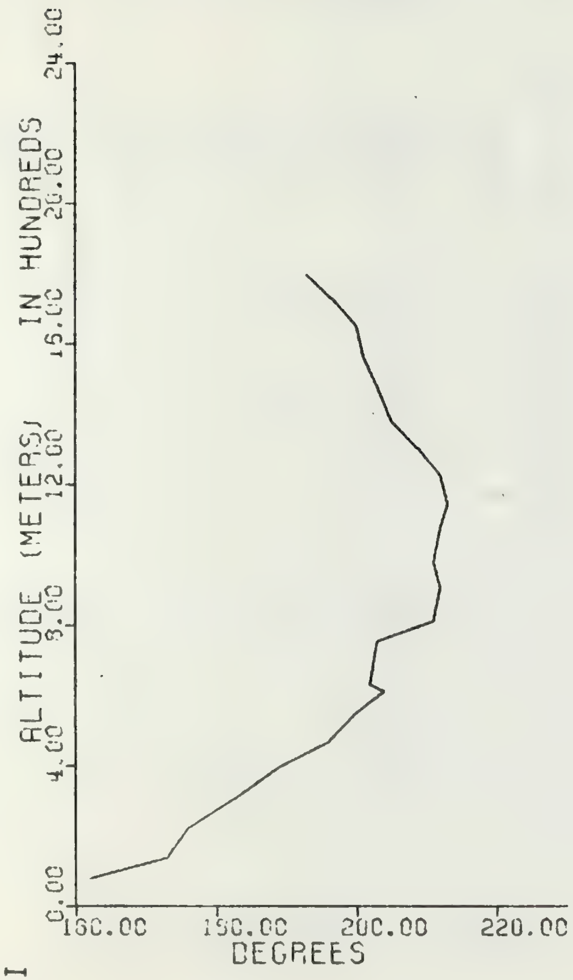
     HEIGHT  DIRECTION   SPEED   TEMP
     METERS   DEGREES    M/SEC   DEG C

        80.     162.       3.5   11.4
       139.     173.       8.6   12.2
       224.     176.      10.7   13.1
       312.     183.      10.6   14.0
       397.     189.      10.2   13.6
       468.     196.       9.4   13.2
       550.     200.       8.0   12.9
       613.     204.       4.9   12.5
       632.     202.       6.6   12.2
       755.     203.       7.3   11.8
       812.     211.       7.3   11.5
       908.     212.       8.1   11.1
       981.     211.       8.4   10.6
      1081.     212.       9.1   10.0
      1145.     213.       8.6    9.4
      1225.     212.       8.6    8.7
      1298.     209.       8.6    8.1
      1379.     205.       9.9    7.5
      1477.     203.      10.4    6.8
      1562.     201.       9.8    6.2
      1650.     200.       9.2    5.6
      1718.     197.       9.2    5.0
      1794.     193.       8.1    4.6
```

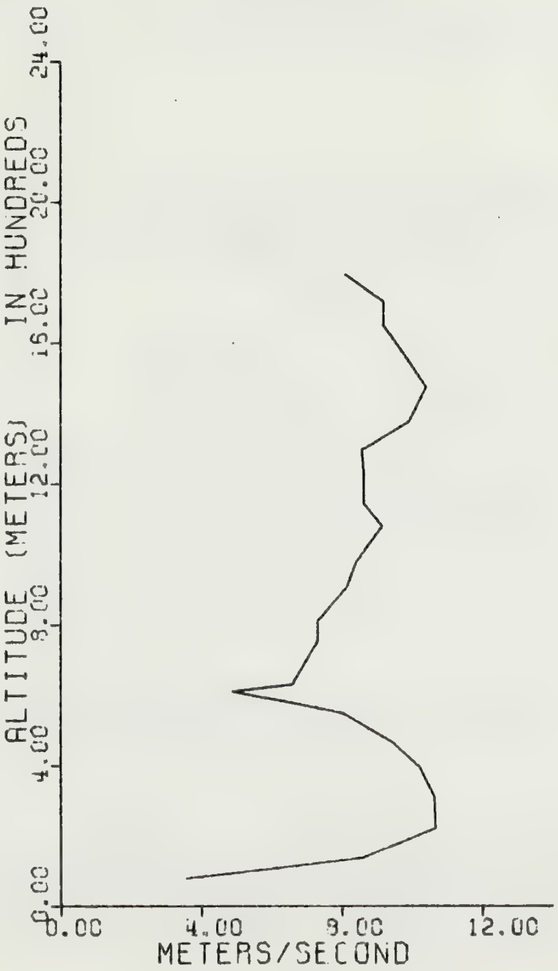
C-B PIBAL SOUNDING

TIME 700 DATE 8/24/78

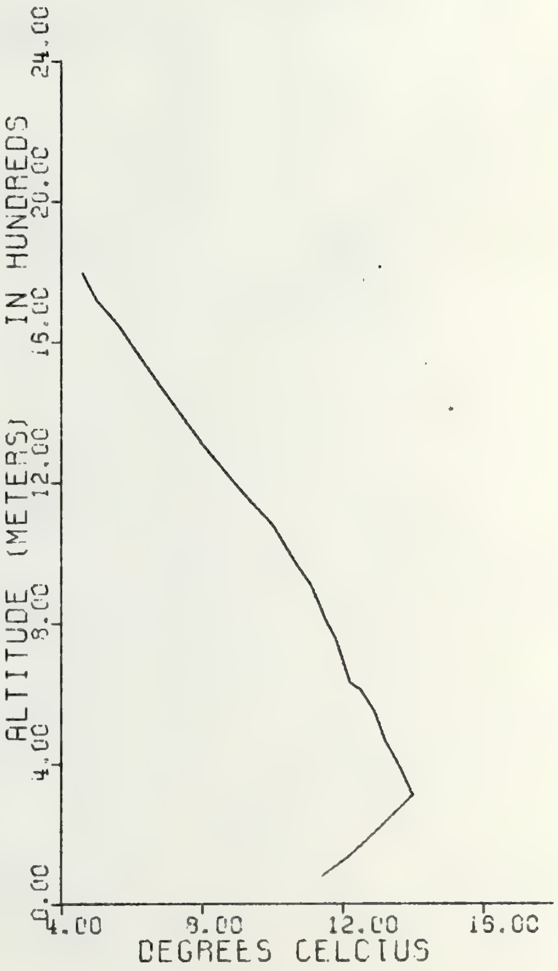
WIND DIRECTION



WIND SPEED



TEMPERATURE

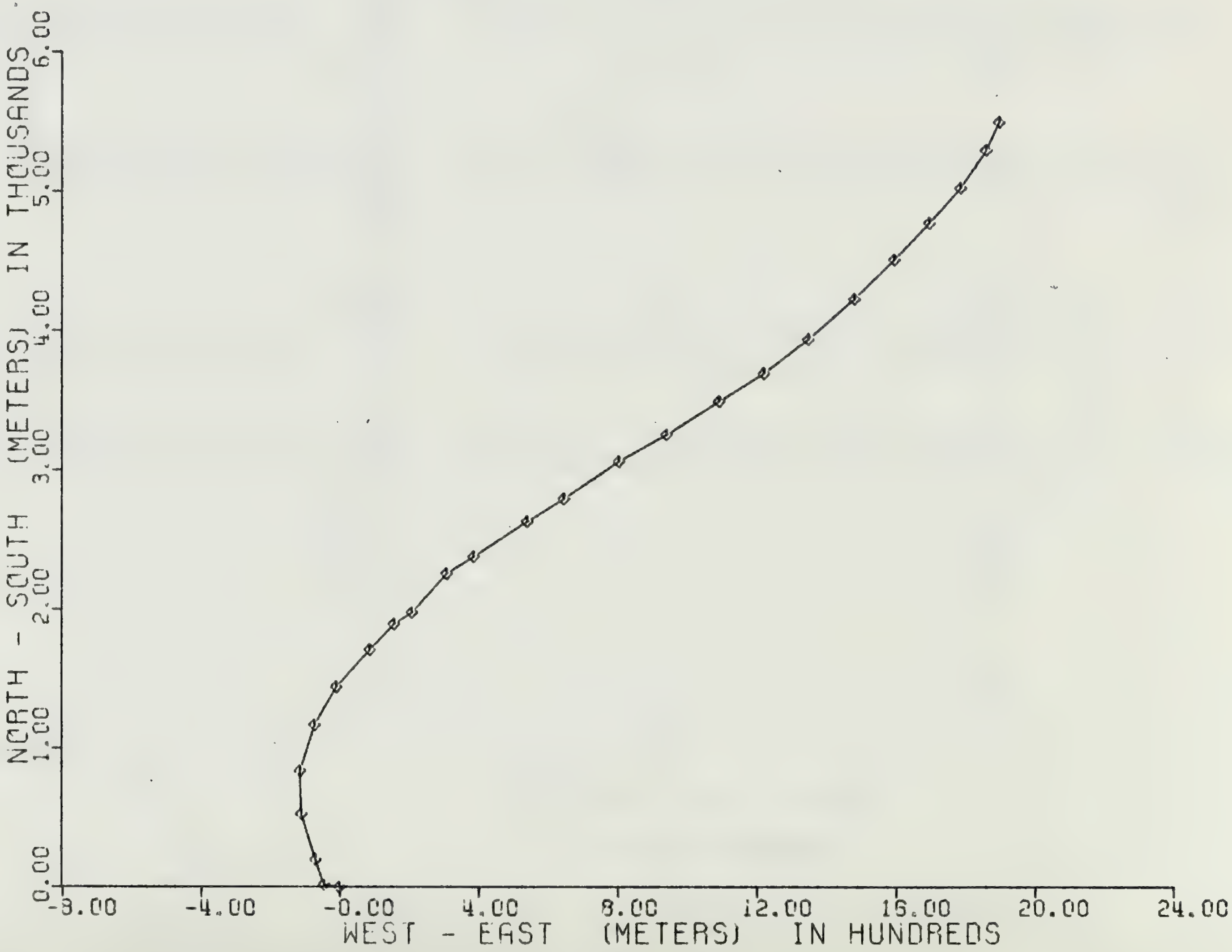


C-B PIBAL SOUNDING

TIME 700 DATE 8/24/78

PIBAL TRAJECTORY - LAUNCH AT ØRIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-8 PIBAL SOUNDING

SOUNDING DATE  8-24-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE           222.5
BASE LINE LENGTH (FT)    4804.2
TIME INTERVAL (SEC)        30.0
BASE LINE HEIGHT (FT)       8.0


                THEODOLITE #1             THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           42.5       -0.1        0.0
   0.5            6.0       11.7           41.5        1.2       29.5
   1.0            1.4       12.7           33.7        3.2       28.6
   1.5            1.1       10.1           27.8        4.6       27.7
   2.0            0.5        8.8           24.7        4.1       26.8
   2.5            1.6        7.7           22.8        4.0       26.0
   3.0            3.7        7.7           21.7        4.2       25.6
   3.5            5.6        8.9           21.3        5.2       25.3
   4.0            7.1       10.1           21.4        6.3       25.0
   4.5            8.8       10.7           21.6        6.9       24.4
   5.0            9.7       10.5           21.5        6.6       23.9
   5.5           10.9        9.4           21.7        6.4       23.3
   6.0           11.7        8.7           21.5        6.1       23.0
   6.5           11.8        8.6           21.1        6.2       23.0
   7.0           12.0        8.4           20.9        6.1       23.0
   7.5           12.5        8.0           20.7        6.1       22.7
   8.0           13.0        7.8           20.9        6.1       22.4
   8.5           13.4        7.8           20.9        6.1       22.2
   9.0           13.7        7.8           20.8        6.1       21.9
   9.5           14.1        7.7           21.0        6.2       21.6
  10.0           14.7        7.8           21.2        6.3       21.4
  10.5           14.8        7.9           21.0        6.4       21.1
  11.0           15.1        7.9           21.1        6.5       20.9
  11.5           15.4        8.9           21.2        6.7       20.3
  12.0           15.8        8.3           21.3        7.2       19.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        77.1        4.5
     2        27.0        6.4
     3        90.8        8.7
     4        15.1       10.0
     5        10.5       11.6
     6        22.5       13.4
     7        26.3       15.0
     8         4.4       16.1
     9         2.2       17.5
    10        74.9       18.4
    11         7.3       19.9
    12         4.5       21.6
    13        15.7       22.9
    14         4.1       23.9
    15        48.2       25.9
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16       82.3       26.7
17       62.9       27.8
18       39.1       29.2
19       89.8       29.9
20       78.7       31.2
21       62.8       32.8
22       87.7       33.7
23      140.8       33.4
24      202.8       36.5


        HEIGHT  DIRECTION  SPEED  TEMP
         FEET    DEGREES   FT/SEC DEG C

           41.     181.     23.2  29.5
          319.     180.     42.8  28.6
          516.     180.     36.7  27.7
          560.     182.     28.8  26.8
          610.     189.     32.2  26.0
          736.     194.     32.5  25.6
          992.     199.     25.8  25.3
         1250.     203.     23.3  25.0
         1463.     203.     22.3  24.4
         1510.     202.     23.5  23.9
         1512.     201.     30.8  23.3
         1551.     196.     29.4  23.0
         1651.     194.     22.0  23.0
         1691.     197.     28.7  23.0
         1789.     200.     26.2  22.7
         1815.     203.     18.2  22.4
         1897.     199.     24.3  22.2
         1995.     202.     19.5  21.9
         2042.     207.     19.3  21.6
         2167.     201.     27.3  21.4
         2309.     199.     23.2  21.1
         2392.     218.      6.0  20.9
         2567.     203.     26.6  20.3


        HEIGHT  DIRECTION  SPEED  TEMP
        METERS   DEGREES   M/SEC  DEG C

           13.     181.      7.1  29.5
           97.     180.     13.0  28.6
          157.     180.     11.2  27.7
          171.     182.      8.8  26.8
          186.     189.      9.8  26.0
          224.     194.      9.9  25.6
          302.     199.      7.9  25.3
          381.     203.      7.1  25.0
          446.     203.      6.8  24.4
          460.     202.      7.2  23.9
          461.     201.      9.4  23.3
          473.     196.      9.0  23.0
          503.     194.      6.7  23.0
          515.     197.      8.7  23.0
          545.     200.      8.0  22.7
          553.     203.      5.5  22.4
          578.     199.      7.4  22.2
          608.     202.      5.9  21.9
          622.     207.      5.9  21.6
          661.     201.      8.3  21.4
          704.     199.      7.1  21.1
          729.     218.      1.8  20.9
```
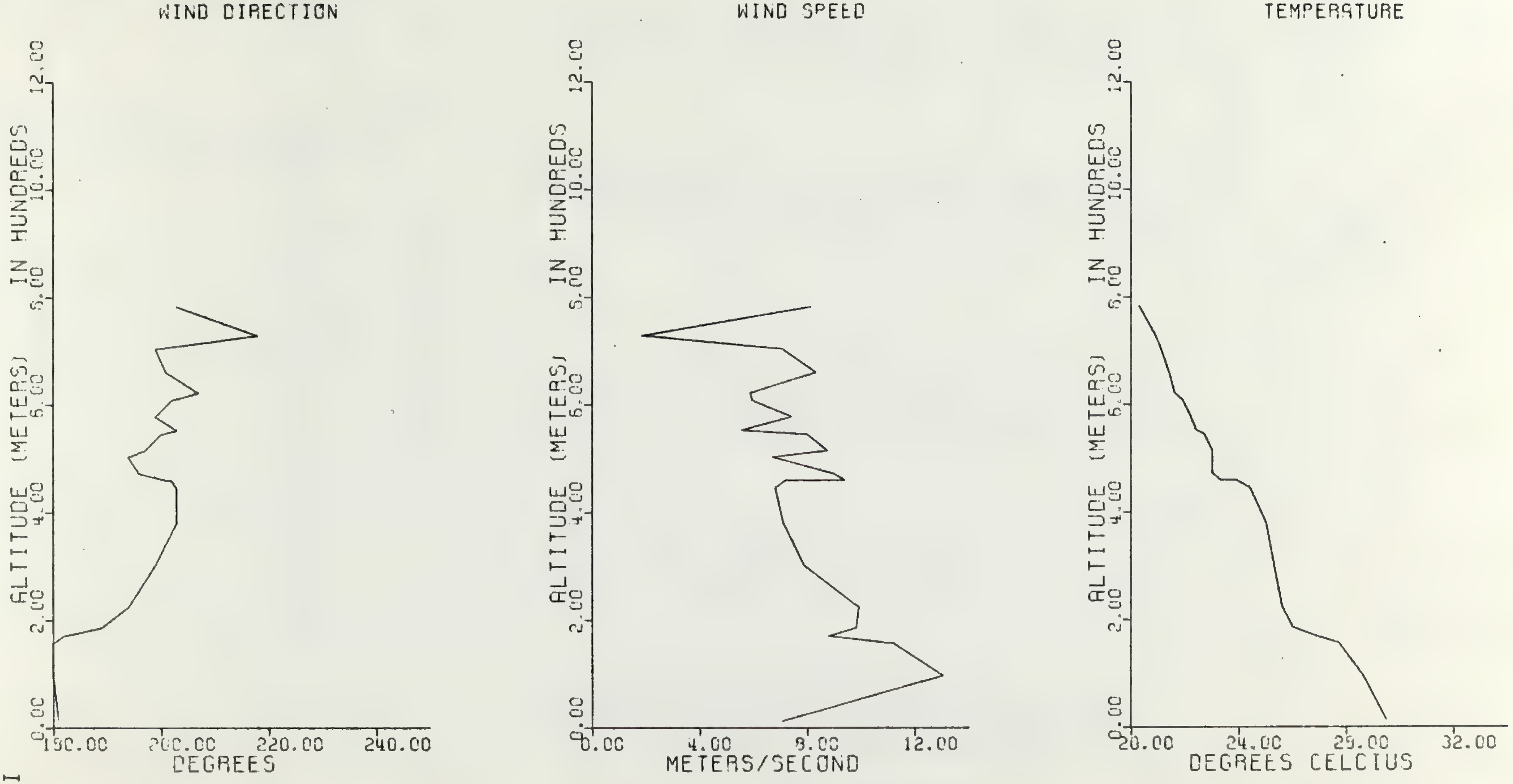

C-B PIBAL SOUNDING

TIME 1330   DATE 8/24/78

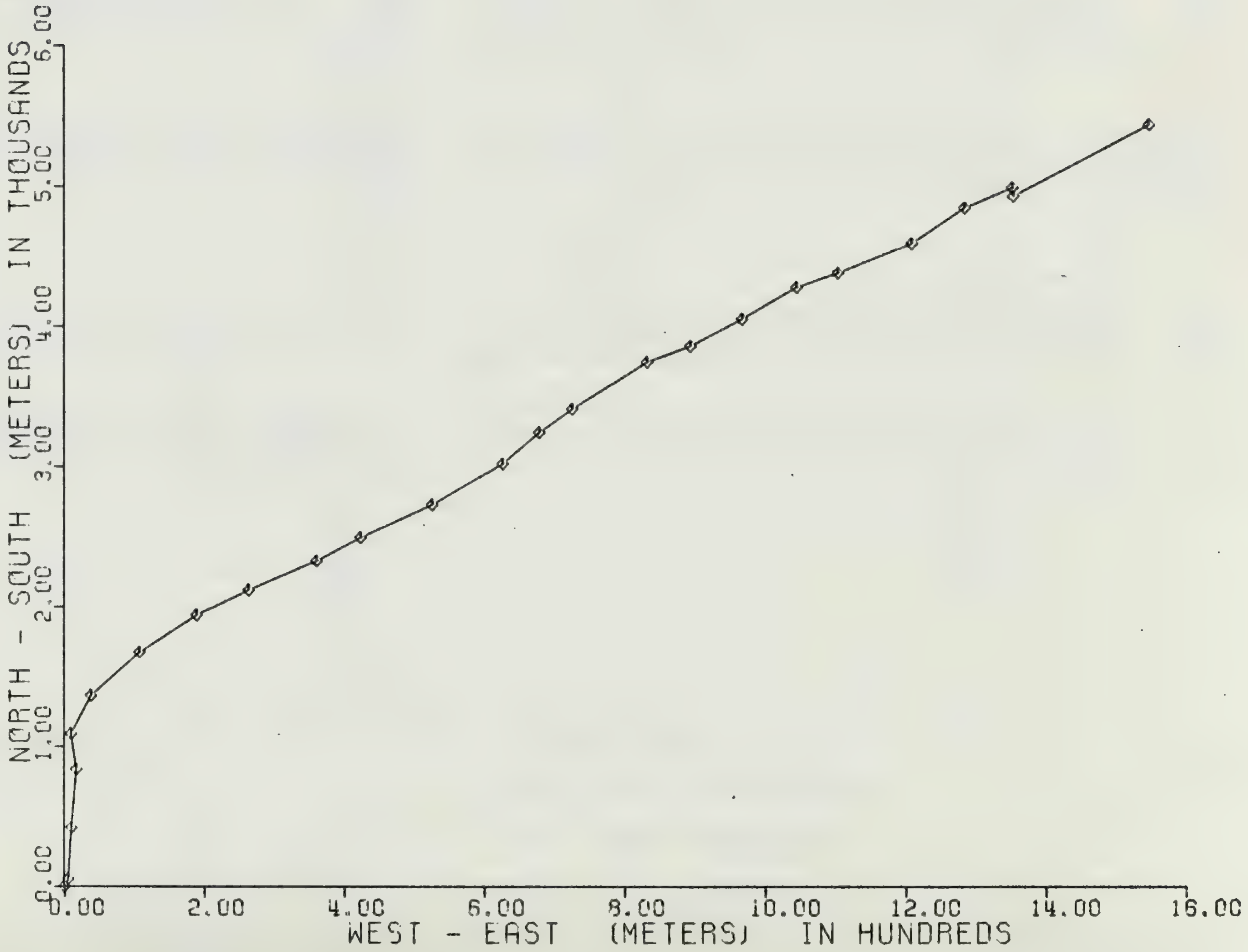


C-B PIBAL SOUNDING

TIME 1330   DATE 8/24/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-25-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           42.5       -0.1          0.0
   0.5          301.2       44.4           39.1        2.9         15.9
   1.0          315.2       45.4           35.8        6.8         18.0
   1.5          327.7       52.1           34.3       10.8         18.7
   2.0          336.7       54.6           33.9       14.0         18.0
   2.5          344.7       55.7           32.2       17.0         17.3
   3.0          354.0       55.9           33.9       19.1         16.5
   3.5            9.0       51.7           33.2       20.1         15.7
   4.0           19.6       46.5           34.2       20.7         14.8
   4.5           24.6       42.2           35.0       20.8         14.0
   5.0           27.6       38.8           35.5       20.7         13.8
   5.5           29.5       36.5           35.7       21.0         13.6
   6.0           30.4       34.6           35.8       21.2         13.4
   6.5           31.8       33.5           36.1       21.6         12.5
   7.0           32.8       33.0           36.6       22.0         11.7
   7.5           33.5       33.2           36.9       22.3         10.8
   8.0           34.2       33.2           37.3       22.8         10.0
   8.5           35.1       33.4           37.8       23.3          9.2
   9.0           36.0       33.5           38.2       23.8          8.3
   9.5           36.3       33.4           38.2       24.1          7.5
  10.0           36.1       32.9           38.2       24.5          6.6
  10.5           36.3       33.0           38.3       24.6          5.8
  11.0           36.7       32.7           38.5       24.7          5.0
  11.5           36.8       32.4           38.5       24.8          4.0
  12.0           36.4       32.0           38.0       25.0          3.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       23.2         4.5
     2        8.4         5.0
     3        7.6         5.6
     4       57.4         6.1
     5        7.1         6.8
     6      136.9         7.3
     7        9.2         8.6
     8       30.3        10.2
     9       11.0        11.6
    10        6.3        13.1
    11       13.8        14.8
    12       14.7        16.6
    13        2.5        18.6
    14       26.8        20.0
    15        7.6        20.4
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     16        29.1        21.6
     17        31.1        22.5
     18         7.8        23.7
     19        23.9        24.9
     20        57.8        27.3
     21        47.7        27.4
     22        45.3        28.7
     23        45.7        30.2
     24        17.0        32.7


            HEIGHT   DIRECTION   SPEED   TEMP
             FEET     DEGREES   FT/SEC  DEG C

              264.      136.       9.6   15.9
              583.      162.       8.7   18.0
              968.      186.       7.1   18.7
             1289.      191.       8.2   18.0
             1695.      208.       8.4   17.3
             1947.      219.      15.8   16.5
             2371.      219.      26.2   15.7
             2778.      221.      28.1   14.8
             3097.      220.      27.4   14.0
             3389.      218.      29.4   13.8
             3806.      216.      31.7   13.6
             4212.      217.      33.0   13.4
             4706.      221.      29.3   12.5
             5094.      226.      15.8   11.7
             5255.      228.      12.7   10.8
             5613.      228.      16.7   10.0
             5937.      230.      17.5    9.2
             6343.      224.      19.5    8.3
             6693.      217.      29.8    7.5
             7363.      217.      21.1    6.6
             7421.      225.      12.1    5.8
             7763.      220.      23.2    5.0
             8133.      214.      33.6    4.0


            HEIGHT   DIRECTION   SPEED   TEMP
            METERS    DEGREES    M/SEC  DEG C

               81.      136.       2.9   15.9
              178.      162.       2.7   18.0
              295.      186.       2.2   18.7
              393.      191.       2.5   18.0
              517.      208.       2.6   17.3
              593.      219.       4.8   16.5
              723.      219.       8.0   15.7
              847.      221.       8.6   14.8
              944.      220.       8.4   14.0
             1033.      218.       9.0   13.8
             1160.      216.       9.7   13.6
             1284.      217.      10.1   13.4
             1434.      221.       8.9   12.5
             1553.      226.       4.8   11.7
             1602.      228.       3.9   10.8
             1711.      228.       5.1   10.0
             1810.      230.       5.3    9.2
             1933.      224.       5.9    8.3
             2040.      217.       9.1    7.5
             2244.      217.       6.4    6.6
             2262.      225.       3.7    5.8
             2366.      220.       7.1    5.0
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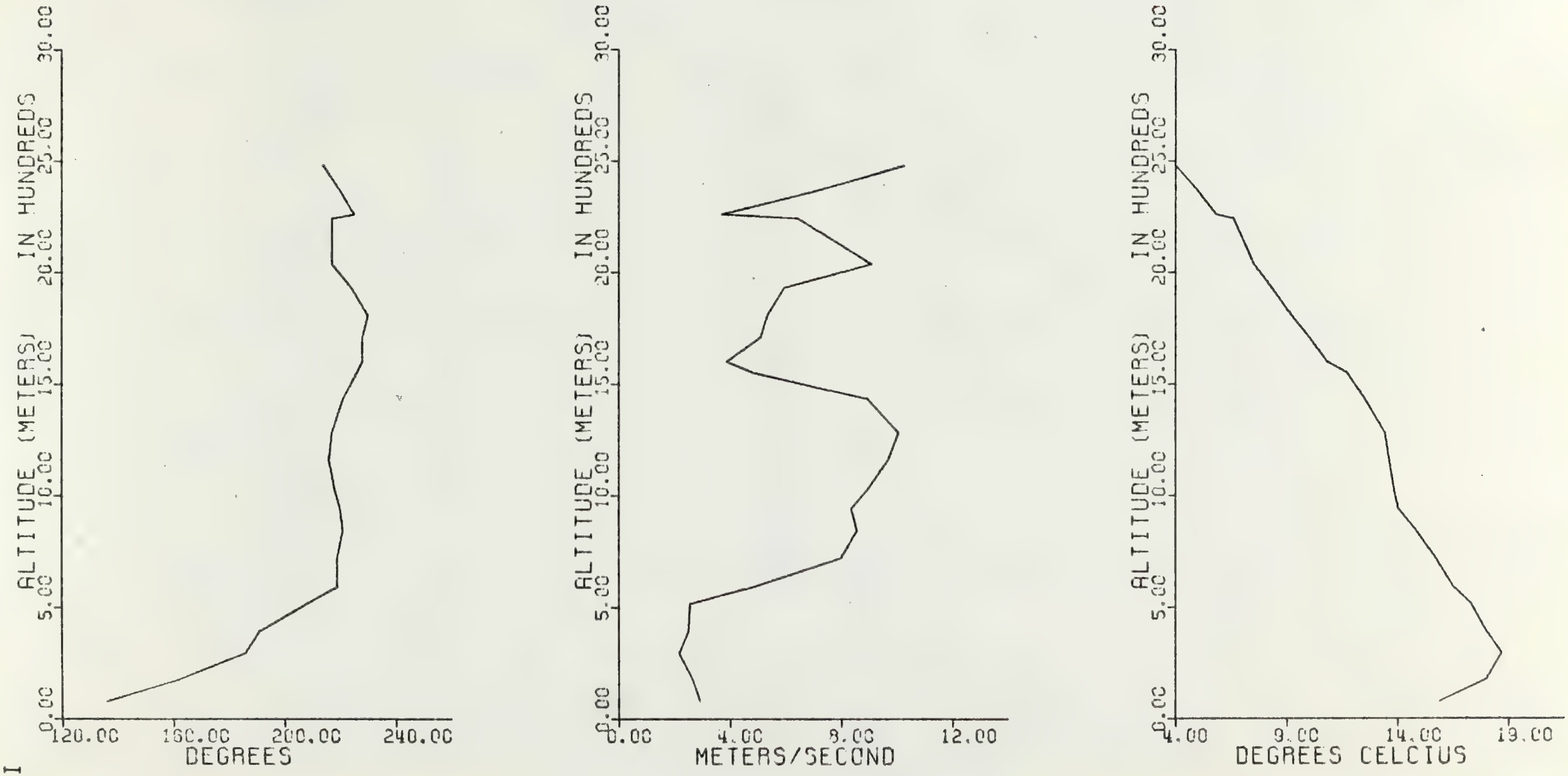
C-B PIBAL SOUNDING

TIME 715 DATE 8/25/78



WIND DIRECTION

WIND SPEED

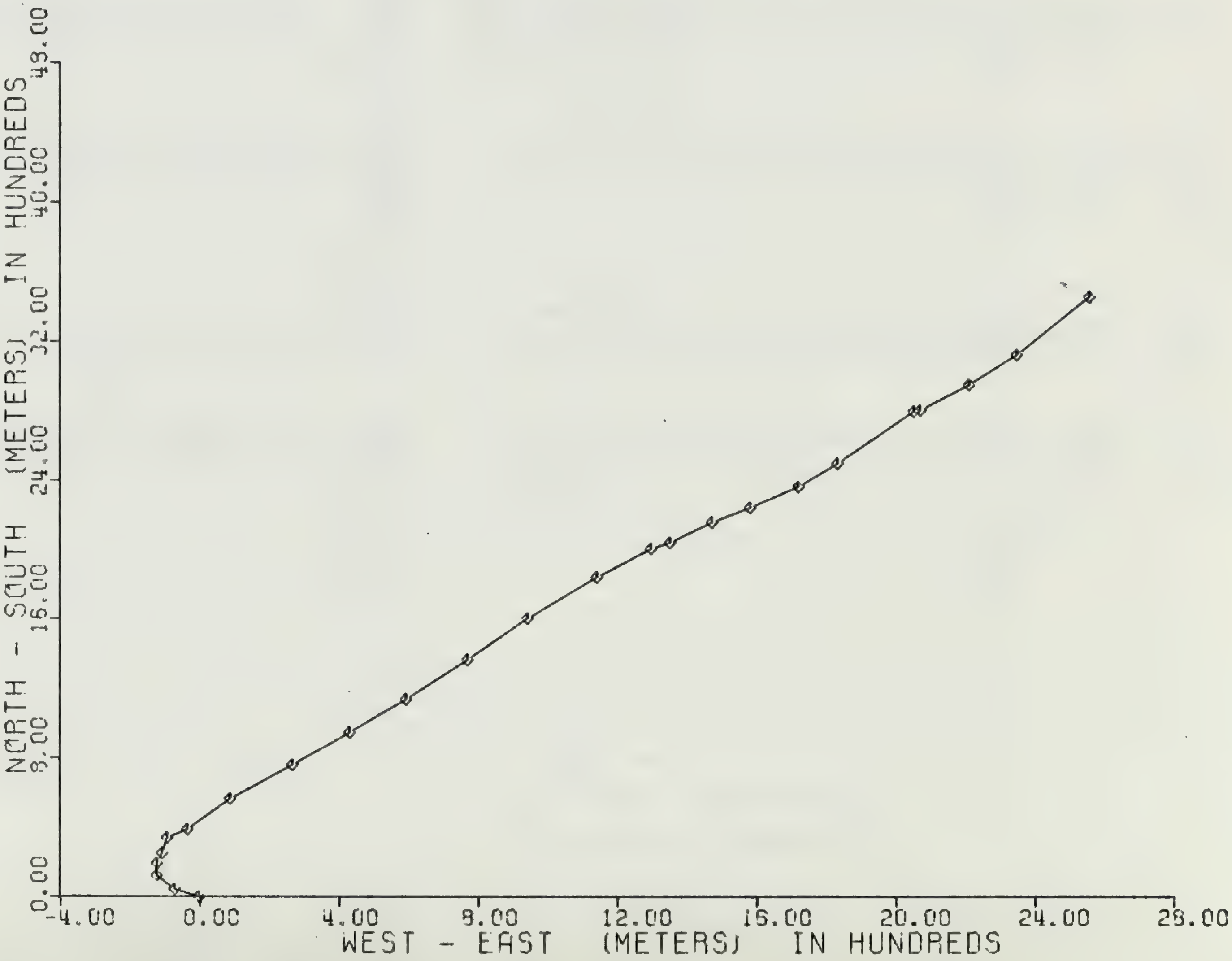
TEMPERATURE

C-B PIBAL SOUNDING

TIME 715 DATE 8/25/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 1330 DATE: 8/25/78

DOUBLE THEODOLITE DATA NOT REDUCED.
SITE #2 LOST BALLOON.

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C-B PIBAL SOUNDING

SOUNDING DATE  8-28-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


               THEODOLITE #1             THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           42.5       -0.1         0.0
   0.5           54.1       64.6           42.5        3.6         8.8
   1.0           64.3       64.9           43.5        6.4        10.5
   1.5           73.7       66.8           44.5        9.3        10.7
   2.0           90.2       67.1           46.2       11.9        11.0
   2.5          110.1       66.6           48.3       14.6        11.2
   3.0          118.6       66.5           50.2       17.6        11.5
   3.5          129.7       63.6           53.2       20.7        11.7
   4.0          139.7       62.5           55.7       24.0        12.0
   4.5          150.2       60.4           59.0       27.8        11.5
   5.0          160.3       58.5           62.8       32.2        11.0
   5.5          168.6       54.1           68.5       36.6        10.5
   6.0          172.1       50.8           77.2       41.1        10.0
   6.5          176.0       46.6           86.4       45.4         9.5
   7.0          180.0       43.8           96.4       49.4         9.0
   7.5          183.2       42.7          104.3       52.4         8.5
   8.0          186.5       42.0          113.8       55.5         8.0
   8.5          188.1       42.4          118.5       58.0         7.6
   9.0          191.3       44.0          120.3       62.1         7.3
   9.5          194.1       46.4          119.2       65.4         7.0
  10.0          196.4       49.3          113.6       69.1         6.7
  10.5          197.4       52.7          106.2       70.5         6.4
  11.0          196.1       56.1           97.5       70.1         5.7
  11.5          192.0       60.2           88.1       68.0         5.0
  12.0          185.4       64.1           81.8       65.3         4.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      30.4         4.6
     2      11.6         5.0
     3       9.0         5.3
     4       8.8         5.6
     5      17.8         5.8
     6       2.7         6.1
     7      11.0         6.4
     8      10.4         6.7
     9       9.1         6.9
    10      17.2         7.2
    11       9.6         7.5
    12      62.7         8.1
    13      10.8         8.6
    14      41.6         9.1
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16        10.8        10.1
17        52.4        10.6
18        84.5        10.8
19        37.6        11.0
20        89.0        11.2
21        33.2        11.5
22        15.1        11.7
23        14.1        12.0
24        12.0        12.5

      HEIGHT  DIRECTION   SPEED   TEMP
       FEET    DEGREES    FT/SEC  DEG C

        317.     244.        4.5    8.8
        573.     266.        3.8   10.5
        844.     299.        4.1   10.7
       1086.     323.        5.8   11.0
       1317.     336.        6.1   11.2
       1599.     336.        7.3   11.5
       1869.     349.        8.8   11.7
       2138.       3.       10.0   12.0
       2417.      11.       12.4   11.5
       2717.      15.       15.6   11.0
       2943.       9.       18.9   10.5
       3296.       8.       20.8   10.0
       3533.      18.       21.4    9.5
       3777.      26.       18.3    9.0
       4001.      32.       16.3    8.5
       4298.      37.       12.8    8.0
       4567.      75.        8.0    7.6
       4832.     116.        8.8    7.3
       5102.     145.        9.5    7.0
       5373.     170.        9.8    6.7
       5678.     201.       10.1    6.4
       5938.     220.       14.3    5.7
       6193.     229.       17.9    5.0

      HEIGHT  DIRECTION   SPEED   TEMP
      METERS   DEGREES    M/SEC   DEG C

         97.     244.        1.4    8.8
        175.     266.        1.2   10.5
        257.     299.        1.2   10.7
        331.     328.        1.8   11.0
        402.     336.        1.9   11.2
        487.     336.        2.2   11.5
        570.     349.        2.7   11.7
        652.       3.        3.0   12.0
        737.      11.        3.8   11.5
        828.      15.        4.8   11.0
        897.       9.        5.8   10.5
       1005.       8.        6.3   10.0
       1077.      18.        6.5    9.5
       1151.      26.        5.6    9.0
       1220.      32.        5.0    8.5
       1310.      37.        3.9    8.0
       1392.      75.        2.4    7.6
       1473.     116.        2.7    7.3
       1555.     145.        2.9    7.0
       1638.     170.        3.0    6.7
       1731.     201.        3.1    6.4
       1810.     220.        4.4    5.7
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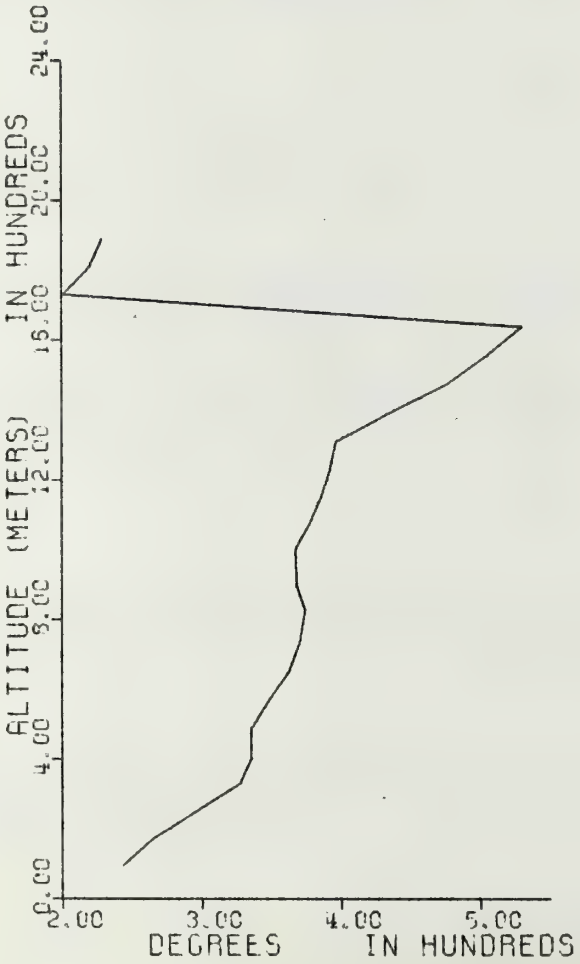
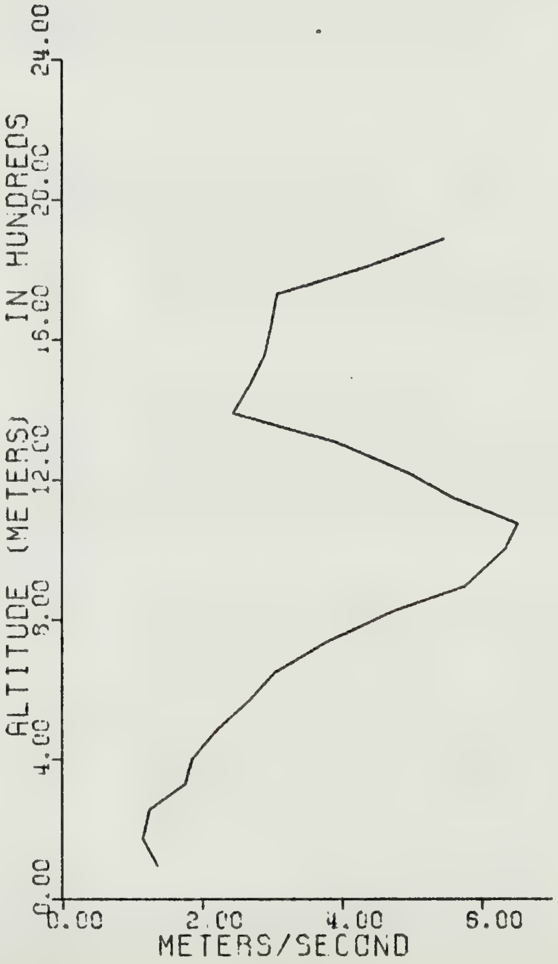
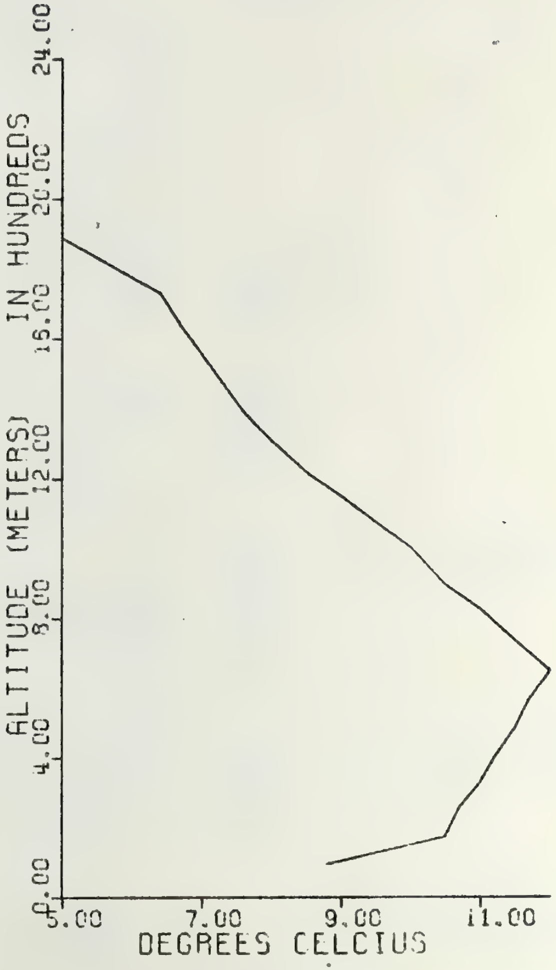
C-B PIBAL SOUNDING

TIME 700   DATE 8/28/78


WIND DIRECTION


WIND SPEED

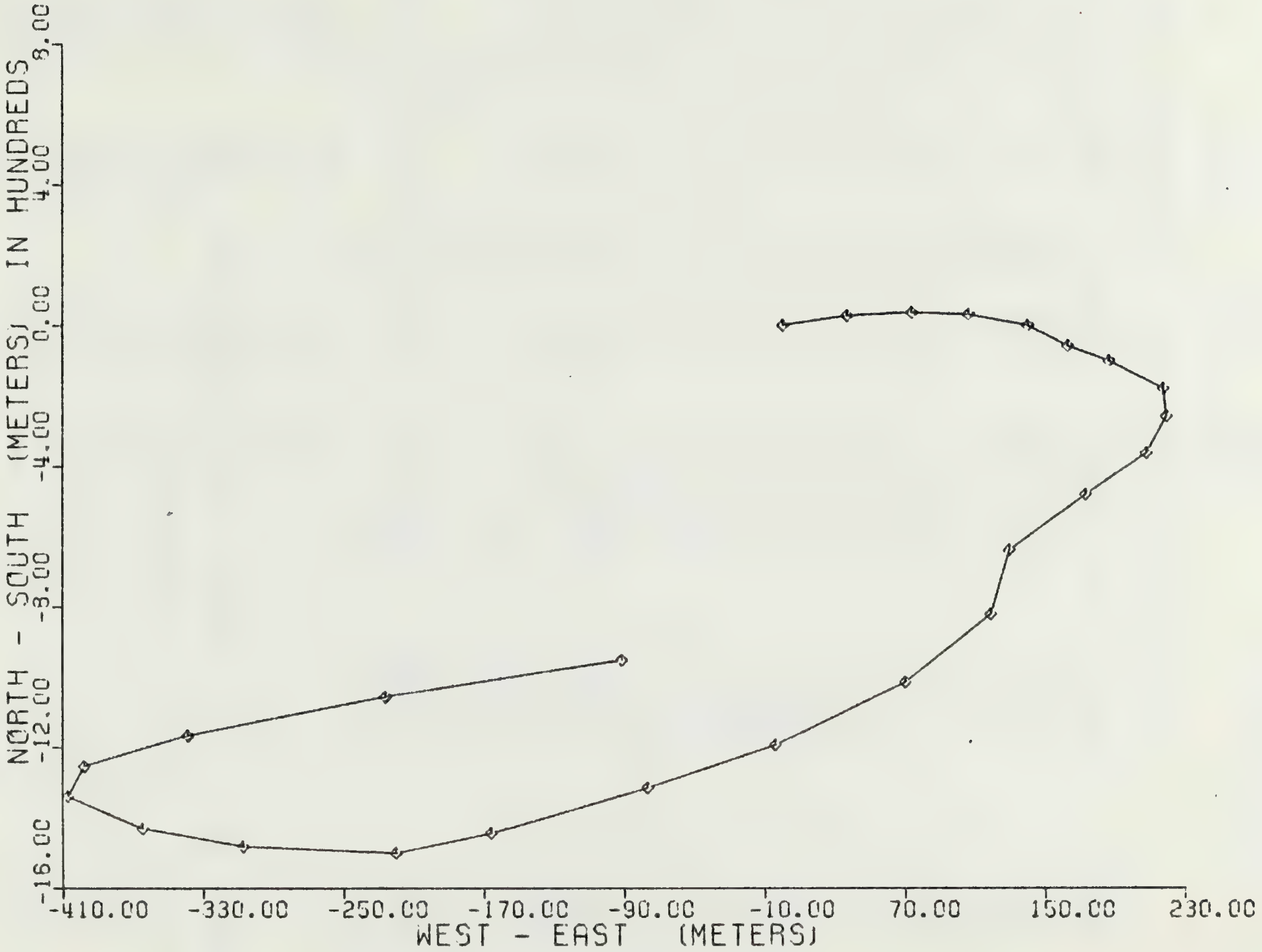

TEMPERATURE

C-B PIBAL SOUNDING

TIME 700   DATE 8/28/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-28-78

BALLOON RELEASED 1430 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0

                THEODOLITE #1            THEODOLITE #2

   TIME       AZIMUTH  ELEVATION      AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0            0.0        0.0         42.5       -0.1        0.0
   0.5           61.5       70.7         43.5        4.9       16.4
   1.0           85.1       59.7         46.5        9.6       15.3
   1.5           84.3       57.6         48.4       13.1       14.2
   2.0           86.1       56.9         50.2       16.3       13.1
   2.5           91.0       59.7         52.2       20.4       12.0
   3.0           97.3       61.4         54.4       24.8       10.9
   3.5           98.5       61.5         57.4       27.5        9.8
   4.0          101.1       61.8         60.2       30.2        8.6
   4.5          104.4       60.8         63.4       31.5        7.2
   5.0          105.3       57.1         64.0       31.3        5.8
   5.5          102.0       55.9         67.5       32.5        5.2
   6.0          102.1       52.8         68.7       33.0        4.6
   6.5          101.3       52.9         69.2       33.2        4.1
   7.0          101.1       51.6         69.2       33.2        3.5
   7.5           99.7       50.8         69.0       32.8        3.0
   8.0           97.5       50.9         68.9       32.4        2.6
   8.5           94.8       48.8         68.6       32.1        2.2
   9.0           92.2       47.7         68.1       31.7        1.8
   9.5           89.0       46.3         67.3       31.0        1.4
  10.0           85.6       44.5         66.9       30.1        1.0
  10.5           82.3       42.0         66.7       28.4        0.6
  11.0           80.3       39.5         66.6       27.9        0.2
  11.5           79.4       38.8         66.1       27.7       -0.2
  12.0           78.1       37.6         65.5       27.9       -0.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      36.9         4.7
     2      10.9         5.5
     3      18.7         6.2
     4       9.7         6.9
     5      26.8         7.5
     6       1.4         8.2
     7     120.8         9.0
     8     205.8         9.8
     9     302.7        10.3
    10      88.7        10.7
    11     306.6        12.2
    12      97.5        13.1
    13     161.5        13.5
    14      37.9        13.7
   16      144.5      14.2
   17       33.7      15.1
   18       21.0      15.7
   19       18.2      16.4
   20       78.7      17.5
   21      222.2      18.6
   22      137.1      20.8
   23       77.0      21.2
   24      104.3      22.8


          HEIGHT  DIRECTION   SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

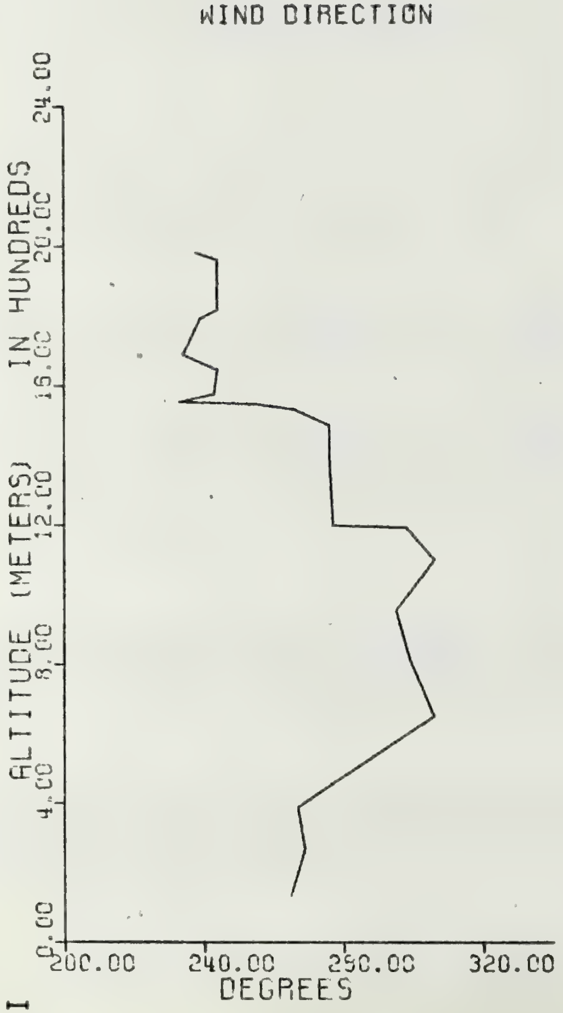
            436.    265.        8.7  16.4
            891.    269.       11.3  15.3
           1279.    267.        9.4  14.2
           1660.    284.        7.6  13.1
           2141.    306.        7.4  12.0
           2673.    299.        8.8  10.9
           3143.    295.        9.6   9.8
           3612.    306.       10.0   8.6
           3910.    298.        9.8   7.2
           3937.    277.       15.6   5.8
           4581.    276.       19.6   5.2
           4877.    276.       10.8   4.6
           5026.    266.        5.1   4.1
           5078.    255.        5.5   3.5
           5100.    233.        5.5   3.0
           5174.    243.       11.4   2.6
           5396.    244.       15.1   2.2
           5540.    234.       14.2   1.8
           5660.    236.       19.2   1.4
           5881.    239.       24.4   1.0
           5963.    244.       32.6   0.6
           6433.    244.       24.4   0.2
           6501.    238.       18.7  -0.2

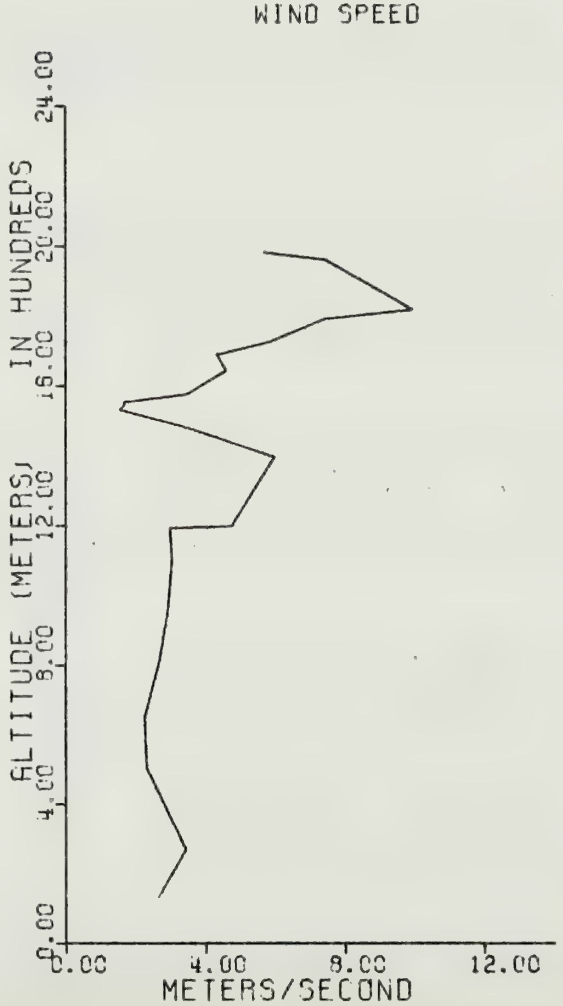

          HEIGHT  DIRECTION   SPEED  TEMP
          METERS   DEGREES    M/SEC  DEG C

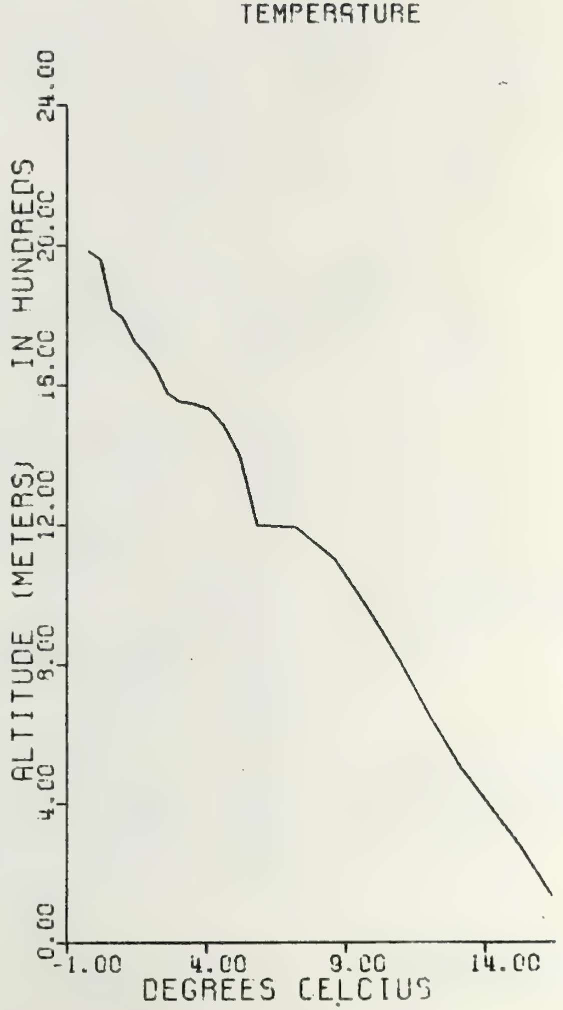
            133.    265.        2.7  16.4
            272.    269.        3.4  15.3
            390.    267.        2.9  14.2
            506.    284.        2.3  13.1
            653.    306.        2.3  12.0
            815.    299.        2.7  10.9
            958.    295.        2.9   9.8
           1101.    306.        3.0   8.6
           1192.    298.        3.0   7.2
           1200.    277.        4.8   5.8
           1396.    276.        6.0   5.2
           1486.    276.        3.3   4.6
           1532.    266.        1.6   4.1
           1548.    255.        1.7   3.5
           1554.    233.        1.7   3.0
           1577.    243.        3.5   2.6
           1645.    244.        4.6   2.2
           1689.    234.        4.3   1.8
           1725.    236.        5.9   1.4
           1793.    239.        7.4   1.0
           1817.    244.        9.9   0.6
           1961.    244.        7.4   0.2
           1982.    238.        5.7  -0.2
```

C-B PIBAL SOUNDING

TIME 1430 DATE 8/28/78


WIND DIRECTION


WIND SPEED

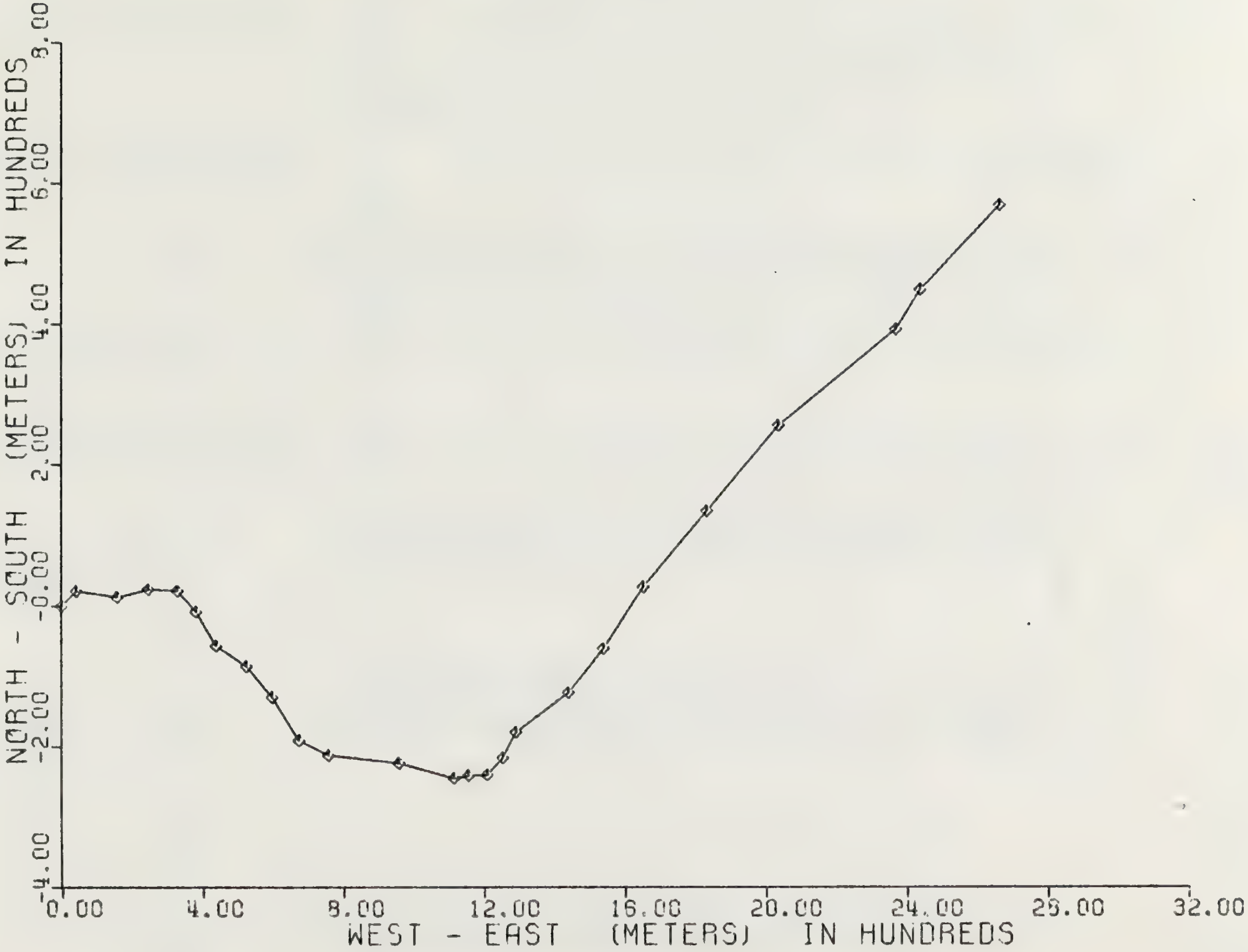

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1430   DATE 8/28/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-30-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


             THEODOLITE #1              THEODOLITE #2

  TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0          0.0       0.0           42.5      -0.1         0.0
  0.5        319.0      85.0           42.2       3.1        10.4
  1.0        336.5      79.5           41.8       4.9        11.2
  1.5         14.0      69.5           41.1       7.9        12.1
  2.0         17.3      62.5           40.4       9.7        13.0
  2.5         14.7      60.2           39.2      11.6        13.0
  3.0         10.2      57.9           37.7      14.0        13.0
  3.5         11.1      56.2           36.9      15.6        13.0
  4.0         13.0      53.4           36.0      16.9        13.0
  4.5         12.5      50.8           34.5      18.3        12.8
  5.0         10.6      49.7           33.3      19.5        12.4
  5.5          9.2      48.9           32.0      20.7        12.1
  6.0         10.4      47.9           31.1      21.6        11.7
  6.5          9.1      46.1           30.7      22.0        11.3
  7.0         13.9      44.9           30.4      22.4        10.9
  7.5         14.4      42.4           30.0      22.9        10.3
  8.0         14.8      41.3           29.5      23.3         9.7
  8.5         15.2      40.7           29.1      23.7         9.1
  9.0         15.2      40.3           28.6      24.1         8.5
  9.5         15.4      39.7           28.3      24.4         7.9
 10.0         16.2      38.9           28.2      24.5         7.3
 10.5         16.8      38.2           28.1      24.6         6.7
 11.0         18.2      37.5           28.6      24.7         6.1
 11.5         19.4      37.4           29.0      25.0         5.4
 12.0         21.6      37.3           29.9      25.5         4.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME       RHO       ERROR

    1        1.8        4.4
    2       12.3        4.6
    3        3.0        5.1
    4        8.1        5.5
    5       12.1        5.9
    6        2.0        6.4
    7        1.6        6.9
    8        9.1        7.5
    9       22.4        8.2
   10        3.8        8.8
   11        4.2        9.3
   12       45.0       10.0
   13       65.4       10.4
   14       79.1       11.5
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16        26.7        13.5
17        22.7        14.2
18        18.1        14.9
19        35.2        15.6
20        33.3        16.5
21        38.0        17.3
22        67.6        18.2
23        64.0        18.9
24        61.2        20.2


      HEIGHT   DIRECTION   SPEED   TEMP
       FEET     DEGREES    FT/SEC  DEG C

        268.     157.        1.3   10.4
        421.     198.        4.2   11.2
        707.     204.        6.9   12.1
        901.     194.        6.3   13.0
       1114.     182.        6.9   13.0
       1395.     186.        7.4   13.0
       1614.     197.        8.3   13.0
       1844.     194.       10.9   13.0
       2119.     185.       10.2   12.8
       2336.     179.        8.8   12.4
       2578.     188.       10.0   12.1
       2841.     190.        9.3   11.7
       2942.     205.       12.5   11.3
       3275.     206.       19.0   10.9
       3576.     199.       17.3   10.3
       3825.     199.       13.4    9.7
       4060.     197.       11.7    9.1
       4283.     197.       11.6    8.5
       4500.     202.       13.3    7.9
       4721.     205.       14.3    7.3
       4934.     212.       14.9    6.7
       5162.     219.       14.1    6.1
       5405.     224.       16.9    5.4


      HEIGHT   DIRECTION   SPEED   TEMP
      METERS    DEGREES    M/SEC   DEG C

         82.     157.        0.4   10.4
        128.     198.        1.3   11.2
        215.     204.        2.1   12.1
        275.     194.        1.9   13.0
        340.     182.        2.1   13.0
        425.     186.        2.3   13.0
        492.     197.        2.5   13.0
        562.     194.        3.3   13.0
        646.     185.        3.1   12.8
        712.     179.        2.7   12.4
        786.     188.        3.0   12.1
        866.     190.        2.8   11.7
        897.     205.        3.8   11.3
        998.     206.        5.8   10.9
       1090.     199.        5.3   10.3
       1166.     199.        4.1    9.7
       1238.     197.        3.6    9.1
       1305.     197.        3.5    8.5
       1372.     202.        4.1    7.9
       1439.     205.        4.4    7.3
       1504.     212.        4.5    6.7
       1573.     219.        4.3    6.1
       1648.     224.        5.2    5.4
```
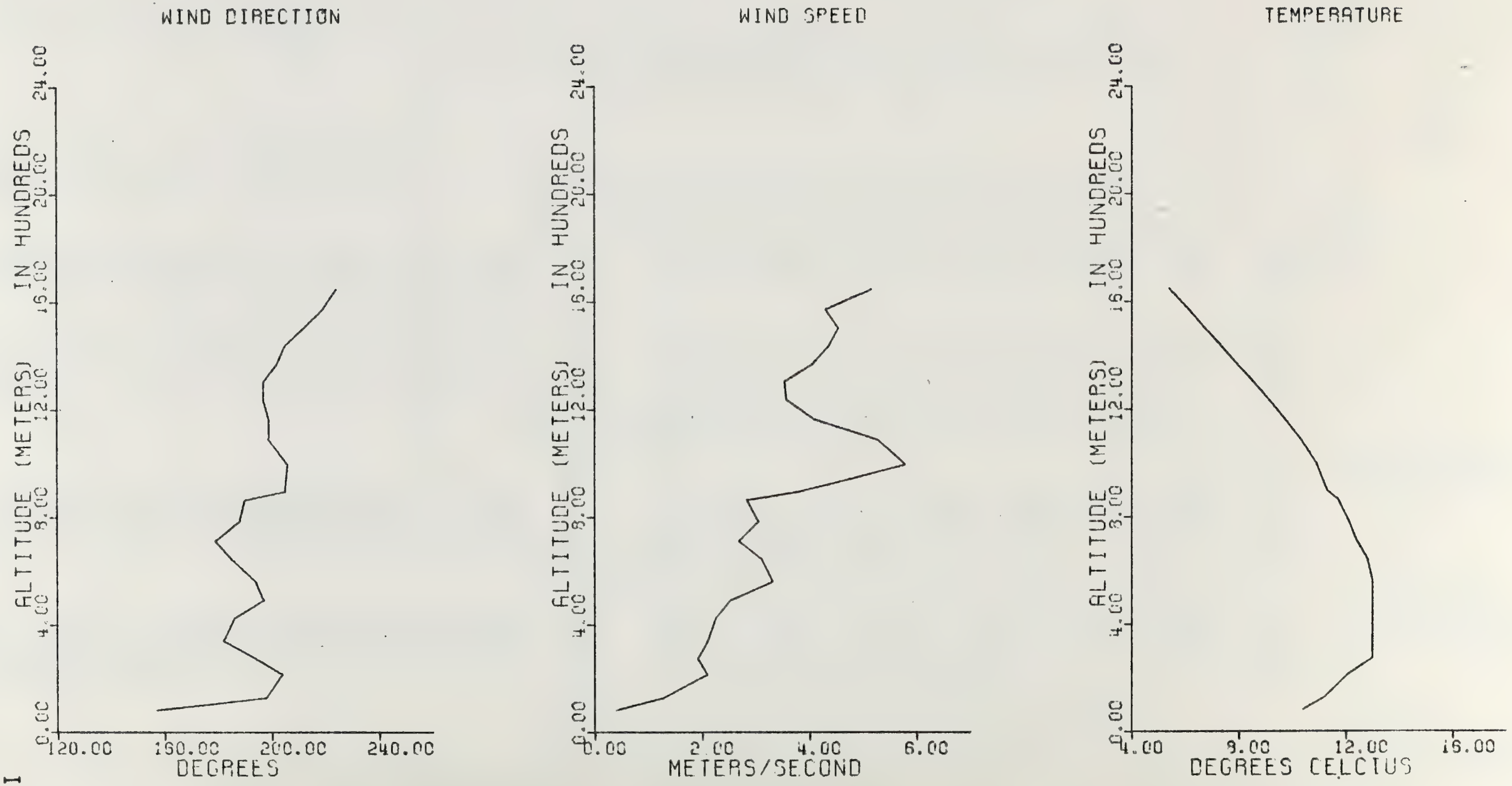

C-B PIBAL SOUNDING

TIME 700 DATE 8/30/78

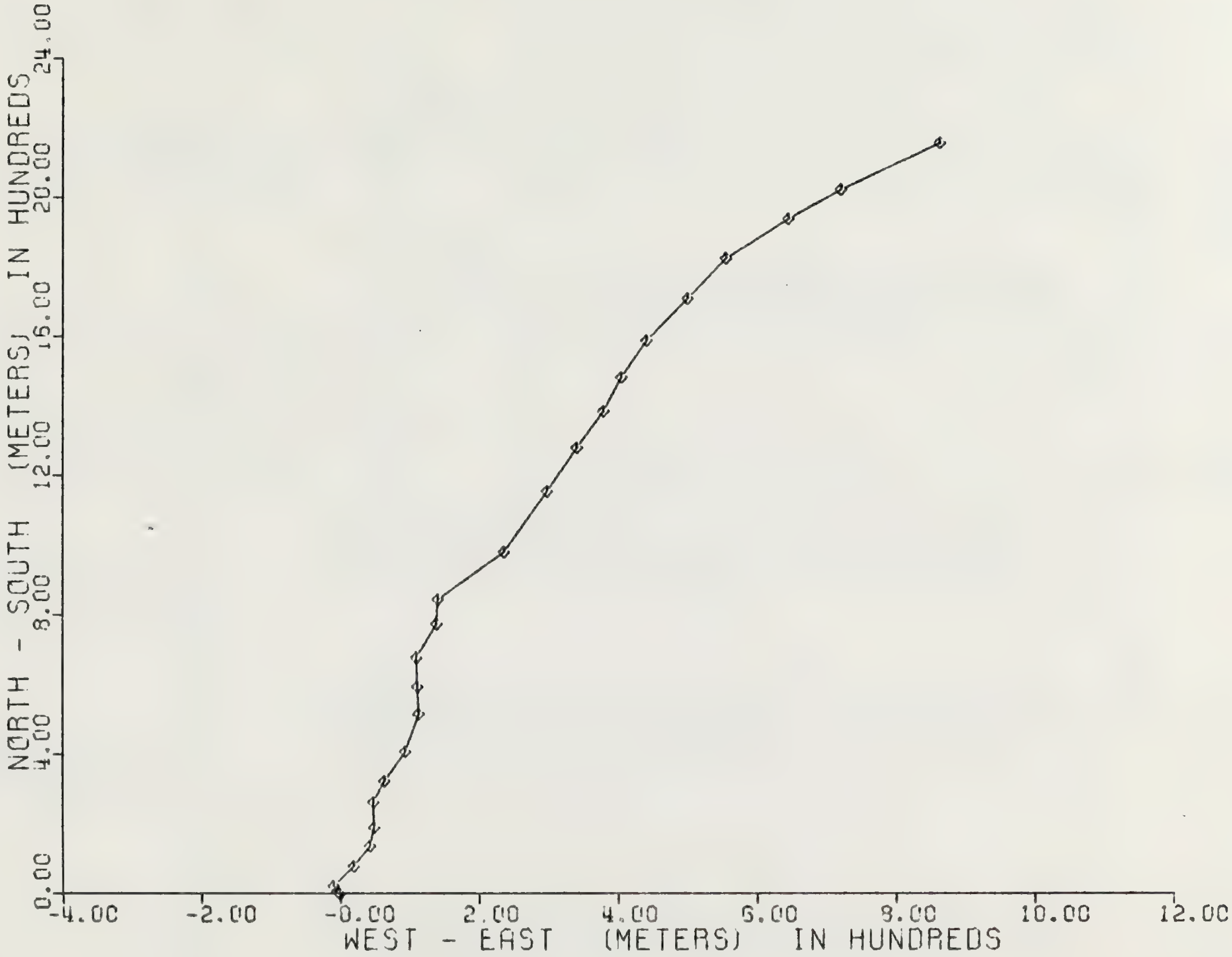


C-B PIBAL SOUNDING

TIME 700 DATE 8/30/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  8-30-78

BALLOON RELEASED 1415 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1                 THEODOLITE #2

  TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0           0.0        0.0             42.5       -0.1          0.0
  0.5         102.2       24.0             50.4        5.9         28.1
  1.0          94.6       25.5             56.6        7.1         26.0
  1.5          96.0       25.6             62.0       11.0         24.5
  2.0          97.5       24.5             65.9       12.3         22.9
  2.5          95.6       23.8             67.9       13.1         21.8
  3.0          93.9       22.2             69.3       12.9         21.2
  3.5          92.3       21.4             70.3       13.2         20.6
  4.0          91.9       20.5             71.5       13.1         20.0
  4.5          91.7       19.4             72.9       13.0         19.4
  5.0          90.8       18.1             73.5       12.3         18.8
  5.5          90.0       16.7             73.9       11.7         18.8
  6.0          88.6       15.7             74.0       11.3         18.8
  6.5          87.0       15.3             73.6       11.0         18.8
  7.0          85.6       15.0             73.1       11.2         18.3
  7.5          84.4       15.1             73.0       11.4         17.8
  8.0          84.0       15.0             73.0       11.5         17.4
  8.5          83.0       14.8             72.7       11.2         16.9
  9.0          81.9       14.5             71.9       11.0         16.5
  9.5          80.7       13.8             71.4       10.6         16.5
 10.0          80.0       13.3             71.1       10.4         16.5
 10.5          79.7       13.2             71.1       10.3         16.5
 11.0          79.2       12.9             71.3       10.1         16.5
 11.5          78.5       12.8             71.5       10.2         16.5
 12.0          77.7       12.8             71.6       10.1         16.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME      RHO       ERROR

    1     160.7       5.6
    2     111.6       7.1
    3      20.2       8.9
    4      12.1      10.2
    5      20.9      11.6
    6      44.0      12.9
    7      34.2      14.3
    8      49.2      15.5
    9      39.1      17.0
   10      74.3      18.3
   11      50.6      19.5
   12      43.6      21.2
   13      89.6      22.4
   14      15.4      23.7
   15      43.9      25.5
```

```
16        20.1        26.3
17        98.8        27.4
18        83.5        27.6
19        74.1        29.0
20        33.8        30.0
21        64.0        30.8
22       117.7        33.1
23       151.1        36.9
24       308.4        40.7


      HEIGHT  DIRECTION   SPEED  TEMP
       FEET    DEGREES   FT/SEC DEG C

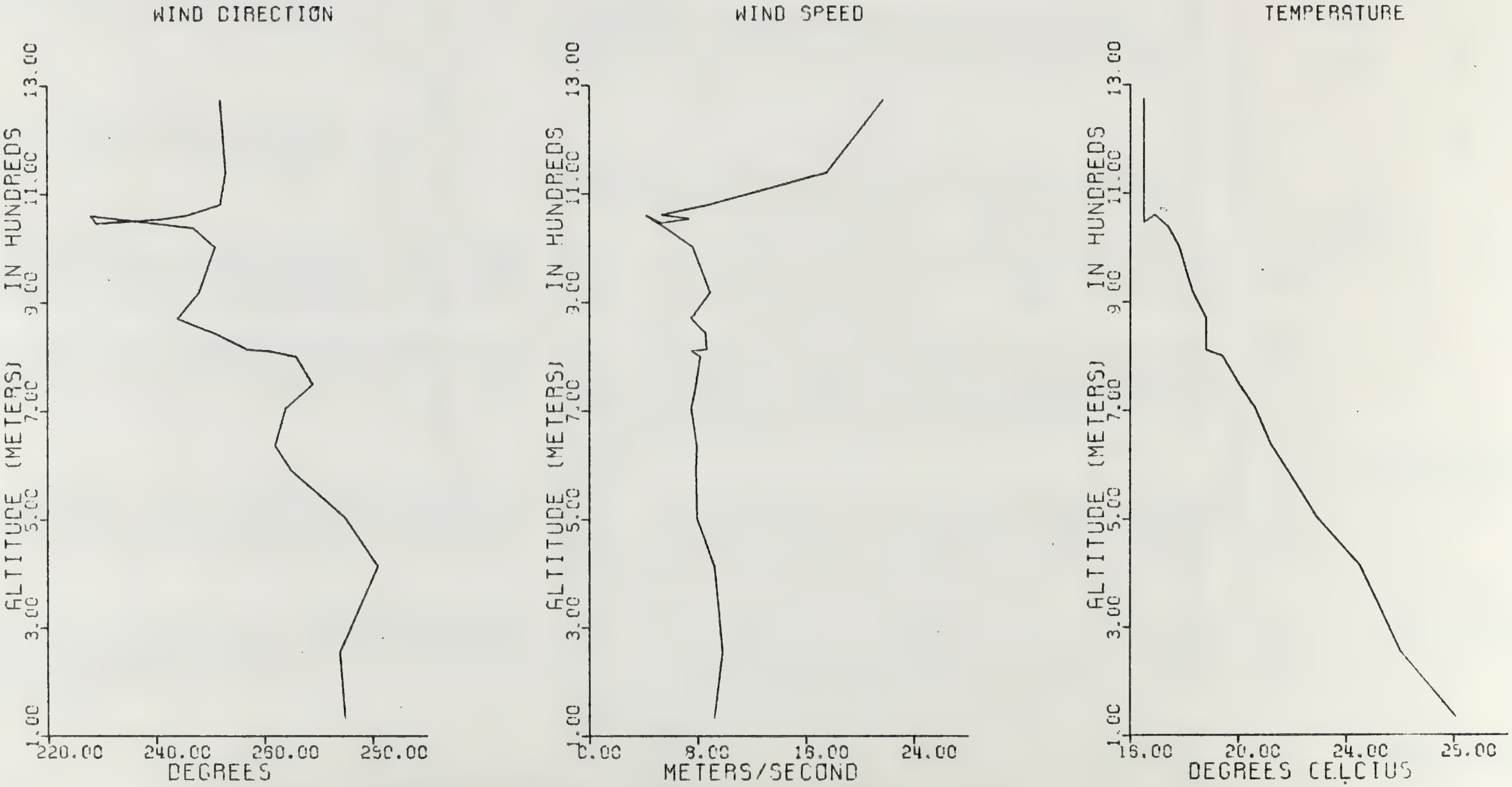
        437.     275.      30.3  28.1
        838.     274.      32.3  26.0
       1360.     281.      30.3  24.5
       1651.     275.      26.1  22.9
       1940.     265.      25.9  21.8
       2091.     262.      26.0  21.2
       2317.     264.      24.7  20.6
       2460.     269.      25.9  20.0
       2626.     266.      26.9  19.4
       2662.     261.      24.8  18.8
       2670.     257.      28.4  18.8
       2766.     251.      28.2  18.8
       2858.     244.      24.7  18.8
       3015.     248.      29.3  18.3
       3291.     251.      25.1  17.8
       3407.     247.      18.4  17.4
       3479.     228.      13.7  16.9
       3435.     229.      17.4  16.5
       3460.     241.      24.3  16.5
       3483.     246.      17.6  16.5
       3547.     252.      29.4  16.5
       3739.     253.      57.5  16.5
       4176.     252.      71.2  16.5


      HEIGHT  DIRECTION   SPEED  TEMP
      METERS   DEGREES    M/SEC  DEG C

        133.     275.       9.2  28.1
        256.     274.       9.8  26.0
        415.     281.       9.2  24.5
        503.     275.       8.0  22.9
        591.     265.       7.9  21.8
        637.     262.       7.9  21.2
        706.     264.       7.5  20.6
        750.     269.       7.9  20.0
        800.     266.       8.2  19.4
        811.     261.       7.6  18.8
        814.     257.       8.7  18.8
        843.     251.       8.6  18.8
        871.     244.       7.5  18.8
        919.     248.       8.9  18.3
       1003.     251.       7.7  17.8
       1038.     247.       5.6  17.4
       1060.     228.       4.2  16.9
       1047.     229.       5.3  16.5
       1055.     241.       7.4  16.5
       1062.     246.       5.4  16.5
       1081.     252.       9.0  16.5
       1140.     253.      17.5  16.5
       1273.     252.      21.7  16.5
```

C-B PIBAL SOUNDING

TIME 1415 DATE 3/30/78

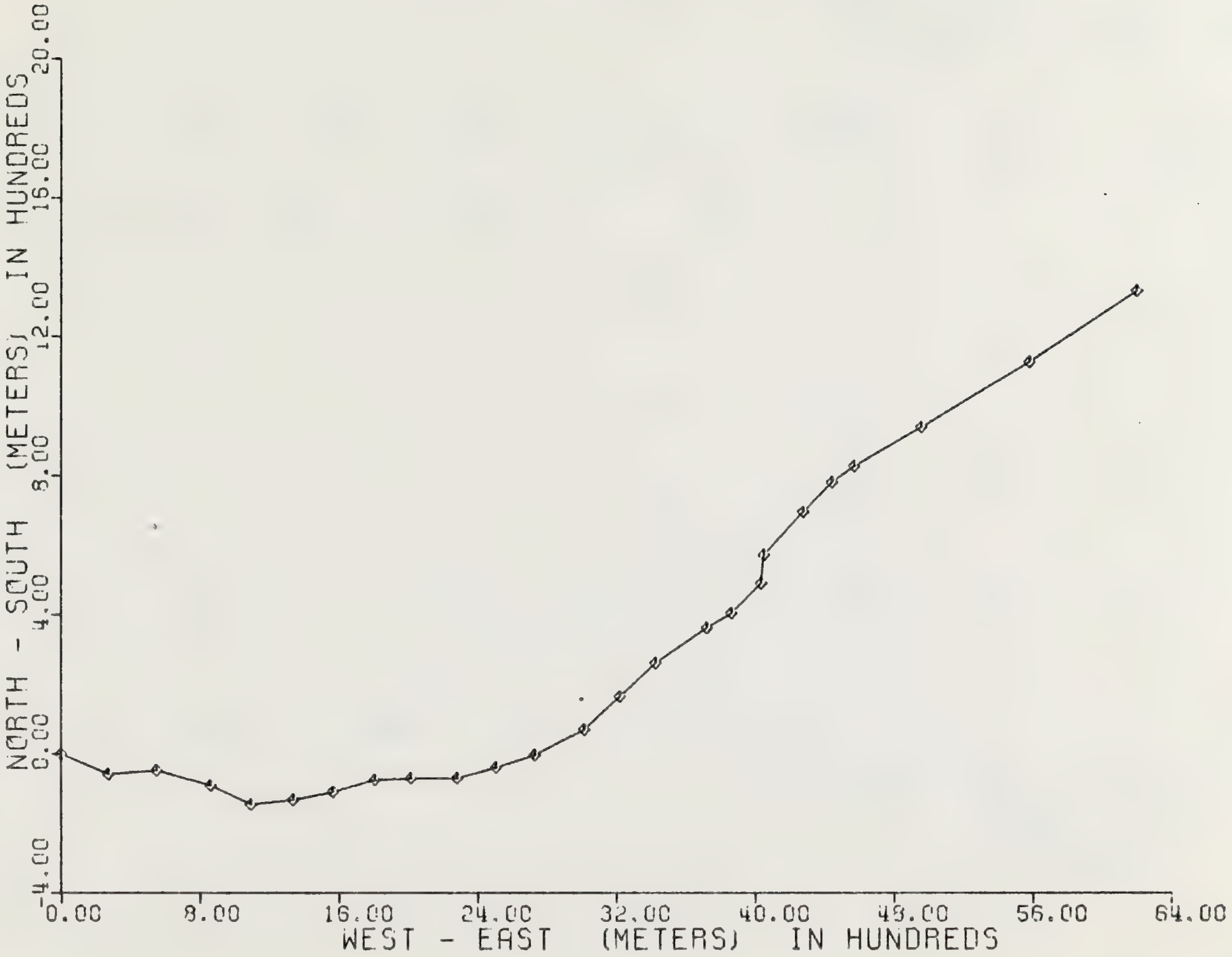


C-B PIBAL SOUNDING

TIME 1415   DATE 8/30/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3
MULTIPOINT RECORDER	73	73	73	73
DATA ACQUISITION SYSTEM	0	0	0	0
OTHER SYSTEMS				
MONTHLY TOTAL	73	73	73	73

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	WS	WD	TEMP	MIXING HT	INVERS. HT	STB 50m	STB 200m	PART	PRECIP.
MULTIPOINT RECORDER	96	97	76						
DATA ACQUISITION SYSTEM	0	0	0						
OTHER SYSTEMS				99	99	99	99	100	100
MONTHLY TOTAL	96	97	76	99	99	99	99	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3	SO_2	H_2S	THC	CH_4	NMHC
MULTIPOINT RECORDER	99	99	99	99	100	100	90	91	90
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	99	99	99	99	100	100	90	91	90

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC

	CO	BAR. PRES.	SOLAR RAD.	WS 10m	WS 30m	WS 60m	WD 10m	WD 30m	WD 60m
MULTIPOINT RECORDER	66	99	99	100	99	100	99	100	99
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	66	99	99	100	99	100	99	100	99

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	Hor. WD 60m	TMP 10m	DT 60-10m	RH	PART	PREC
MULTIPOINT RECORDER	0	100	98			
DATA ACQUISITION SYSTEM	0	0	0			
OTHER SYSTEMS				100	100	85
MONTHLY TOTALS	0	100	98	100	100	85

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 042
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	99	100	100	90
MONTHLY TOTALS	99	100	100	90

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 056
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	48	49	49	90
MONTHLY TOTALS	48	49	49	90

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 20
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
PARTICULATE	24-Hr	1	10	00	32.1	ug/m^3
		2	7	00	25.4	ug/m^3
		3	28	00	25.0	ug/m^3
		4	4	00	24.3	ug/m^3
		5	1	00	21.9	ug/m^3
OZONE	1-Hr	1	19	18	84.0	ug/m^3
		2	19	14	80.0	ug/m^3
		3	19	15	80.0	ug/m^3
		4	19	13	78.0	ug/m^3
		5	19	19	78.0	ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
PARTICULATE	24-Hr	1	10	00	64.1	ug/m^3
		2	4	00	25.6	ug/m^3
		3	7	00	25.6	ug/m^3
		4	25	00	21.5	ug/m^3
		5	1	00	21.4	ug/m^3
CARBON MONOXIDE	1-Hr	1	4	7	1100.0	ug/m^3
		2	4	14	1100.0	ug/m^3
		3	1	14	700.0	ug/m^3
		4	2	11	600.0	ug/m^3
		5	18	9	600.0	ug/m^3
	8-Hr	1	2	4	360.0	ug/m^3
		2	4	7	350.0	ug/m^3
		3	1	10	340.0	ug/m^3
		4	18	2	310.0	ug/m^3
		5	1	18	300.0	ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
SULFUR DIOXIDE	3-Hr	1	1	7	1.0	ug/m^3
		2	-	-	0.0	ug/m^3
		3	-	-	0.0	ug/m^3
		4	-	-	0.0	ug/m^3
		5	-	-	0.0	ug/m^3
	24-Hr	1	1	1	0.1	ug/m^3
		2	-	-	0.0	ug/m^3
		3	-	-	0.0	ug/m^3
		4	-	-	0.0	ug/m^3
		5	-	-	0.0	ug/m^3
OZONE	1-Hr	1	27	18	161.0	ug/m^3
		2	27	17	157.0	ug/m^3
		3	27	19	153.0	ug/m^3
		4	27	11	147.0	ug/m^3
		5	27	12	147.0	ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 42
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
PARTICULATE	24-Hr	1	7	00	22.8	ug/m^3
		2	22	00	22.3	ug/m^3
		3	4	00	21.9	ug/m^3
		4	16	00	17.3	ug/m^3
		5	19	00	17.3	ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 56
AUGUST, 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
PARTICULATE	24-Hr	1	13	00	37.7	ug/m^3
		2	4	00	19.9	ug/m^3
		3	1	00	19.0	ug/m^3
		4	7	00	19.0	ug/m^3
		5	16	00	17.4	ug/m^3

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DATA REPORT

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 020																	
NO					X												
NO_x					X												
NO_2					X												
O_3					X												
CO																	
SO_2																	
H_2S																	
WIND SPEED					X												
WIND DIRECTION					X												
TEMPERATURE					X												
MIXING HT.					X												
INVERSION HT.					X												
STABILITY 50m					X												
STABILITY 200m					X												
PARTICULATE					X												
PRECIPITATION					X												
SITE 023																	
NO					X												
NO_x					X												
NO_2					X												
O_3					X												
SO_2					X												
H_2S					X												
THC					X												

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAG
SITE 023 (Cont'd)																	
CH_4					X												
NMHC					X												
CO					X												
PRESSURE					X												
SOLAR RADITION					X												
WIND SPEED 10m					X												
WIND SPEED 30m					X												
WIND SPEED 60m					X												
WIND DIRECTION 10m					X												
WIND DIRECTION 30m					X												
WIND DIRECTION 60m					X												
HOR. WIND DIR. 60m																	
TEMPERATURE 10m					X												
TEMPERATURE 30m					X												
TEMPERATURE 60m					X												
DELTA T 60-10m					X												
RELATIVE HUMIDITY					X												
PARTICULATES					X												
PRECIPITATION					X												
EVAPORATION					X												
PILOT BALLOONS					X												

	1978																
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									PAGE
SITE 042																	
WIND SPEED 10m					X												
WIND DIRECTION 10m					X												
TEMPERATURE 10m					X												
PARTICULATE					X												
SITE 056																	
WIND SPEED 10m					X												
WIND DIRECTION 10m					X												
TEMPERATURE 10m					X												
PARTICULATE					X												

Malfunction Codes

Numerical Entry Code	Letter Code	Description
9000	CA	Calibration (calibration, system check)
9100	MT	Maintenance (changing paper, tape, charcoal)
9200	FO	Flame Out (on the GC-THC, HC, CH_4, CO)
9300	IM	Instrument Malfunction (instrument failures)
9400	PF	Power Failure (generator failure)
9500	RF	Recording System Failure (chart jams, runs out)
9550	NV	Not Visible (values were not within range of instrument i.e. inversion heights may exist beyond the full scale of the Acoustic Radar)
9600	LI	Local Interference (car nearby)
9650	OE	Operator Error (Field tech leaves switch in wrong position out of AV's control.)
9700	OS	Off Scale (at top of chart)
9750	IN	Interference (CO_2 interference on sulfur data, SO_2 interference in oxidant readings)
9800	SE	Special Experiment
9850	OR	Out for Repair (instrument removed from site with no replacement)
9900	VA	Variable Wind Direction
9950	CM	Calm (no wind direction when wind speed = 0)
9980	UN	Unlimited Ceiling (reported by NWS Stations)
9900		Blank (causes a space to be printed as in the beginning of a new month before a component starts)
8000	TR	Trace of Precipitation

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

	HOUR (LOCAL STANDARD TIME)																									
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	9	6	4	4	6	6	6	6	6	6	6	6	2	2	6	6	4	9
19	2	2	2	2	6	(MT)	(MT)	19	6	4	4	4	2	0	0	0	0	0	0	(RF)	(RF)	(RF)	(RF)	(RF)	4	19
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
21	0	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	4	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
28	0	0	0	0	0	0	0	0	0	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	2	2	2	6	0	9	19	9	6	4	4	6	6	6	6	6	6	6	6	2	2	6	6		19

OXIDES OF NITROGEN
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0
8	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0	0	0	0	0	( )	0
9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	2	0	0	0	0	0	2
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
24	0	4	0	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8
25	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
26	9	8	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
27	0	0	0	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	9	8	0	0	8	0	0	15	15	9	0	0	0	0	0	0	0	0	4	9	0	0	0	6		15

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	6	4	2	2	4	4	4	4	2	4	4	4	1	1	4	4	2	6
19	1	1	1	1	4	(MT)	(MT)	12	4	2	2	2	1	0	0	0	0	0	0	(RF)	(RF)	(RF)	(RF)	(RF)	2	12
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	2	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	0	0	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	1	1	1	1	4	0	6	12	6	4	2	2	4	4	4	4	2	4	4	4	1	1	4	4		12

NITRIC OXIDE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0
8	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0	0	0	0	0	( )	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		2

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
19	0	0	0	0	0	(MT)	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	(RF)	(RF)	(RF)	(RF)	(RF)	0	0
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	(MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0		4

NITROGEN DIOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1979
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0
8	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0	0	0	0	0	( )	0
9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	2	0	0	0	0	0	2
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
24	0	4	0	0	8	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	8
25	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
26	6	8	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
27	0	0	0	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	8	8	0	0	8	0	0	15	15	9	0	0	0	0	0	0	0	0	2	9	0	0	0	6		15

OZONE
(UG/M3)

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	26	26	29	33	29	29	31	29	49	69	69	71	69	65	69	65	65	59	55	39	37	35	35	37	47	71
2	43	33	33	35	29	29	27	31	31	45	55	69	65	65	63	63	65	59	57	49	45	41	29	29	45	69
3	29	27	29	33	27	33	26	29	43	57	59	59	59	59	59	57	49	53	47	33	29	49	49	47	43	59
4	49	47	51	45	49	29	29	29	41	61	75	67	65	61	61	63	53	37	37	27	29	27	27	26	45	75
5	27	27	29	27	31	27	14	24	49	53	61	59	55	57	59	59	57	57	49	26	29	26	22	22	39	61
6	22	24	24	27	27	26	16	14	63	51	55	57	55	51	53	55	49	51	49	43	27	20	26	22	37	57
7	26	24	22	20	22	22	22	29	39	49	49	49	49	51	51	57	57	47	39	45	53	37	29	12	37	57
8	10	6	16	14	20	18	2	6	27	45	47	53	53	53	53	53	51	57	37	29	22	16	14	16	29	57
9	18	27	26	16	26	20	16	18	26	47	59	57	57	51	49	49	49	53	51	29	29	29	26	26	35	59
10	20	16	18	10	10	18	29	20	29	43	47	45	43	43	43	43	45	39	37	45	39	39	37	26	33	47
11	49	59	59	65	53	59	49	39	53	65	55	53	49	49	47	47	45	45	43	39	29	29	20	20	47	65
12	12	4	2	4	0	0	0	10	29	35	39	39	39	39	39	39	45	45	29	20	10	16	10	12	22	45
13	10	16	14	14	10	10	10	16	24	43	45	45	45	49	53	53	53	49	45	45	39	37	35	18	31	53
14	29	29	20	14	18	16	24	29	29	20	24	33	45	39	29	35	35	31	20	20	16	14	4	10	24	45
15	12	10	4	4	0	0	0	0	10	20	53	63	59	65	65	65	69	73	69	65	65	59	51	41	39	73
16	47	45	45	47	47	47	39	47	51	69	69	84	86	78	73	69	65	63	59	57	55	59	51	49	59	86
17	51	49	47	49	51	51	47	51	53	69	75	67	71	69	73	69	67	65	65	63	69	71	71	67	61	75
18	67	67	67	67	69	67	63	90	45	43	29	29	33	33	33	39	41	39	26	(MT)	(MT)	(MT)	(MT)	(MT)	49	90
19	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	20	26	27	29	29	29	27	26	24	22	24	(RF)	(RF)	(RF)	(RF)	(RF)	( )	29
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	10	12	18	22	24	29	31	29	29	39	37	27	14	8	4	2	6	20	39
21	6	4	2	2	2	0	2	16	33	37	45	41	29	47	49	59	59	57	33	26	20	26	20	20	26	59
22	20	20	24	20	20	20	18	22	26	37	47	49	51	53	57	55	55	53	39	26	29	33	31	14	33	57
23	20	20	24	26	26	24	14	22	33	33	49	57	53	49	45	41	45	45	41	20	14	10	10	10	29	57
24	8	12	14	16	22	16	14	14	20	33	31	39	45	45	49	53	51	49	51	47	47	33	24	16	31	53
25	18	16	10	10	12	14	12	18	22	33	47	45	45	35	45	45	41	45	41	29	20	20	20	18	27	47
26	20	20	16	14	20	20	14	18	29	45	51	51	61	59	59	55	57	53	37	20	18	19	14	10	31	61
27	18	22	20	20	20	18	16	16	22	(MT)	43	43	49	49	53	53	51	49	35	20	22	22	26	26	31	53
28	22	26	26	29	20	20	20	14	22	26	(MT)	(MT)	(MT)	45	45	45	47	49	47	22	20	16	18	18	27	49
29	16	14	14	20	18	14	10	10	20	26	33	33	39	39	45	47	49	51	49	53	20	14	16	16	27	53
30	14	20	20	20	20	22	20	20	20	29	43	49	49	51	57	53	53	53	49	39	35	29	26	26	33	57
AV	26	26	26	26	26	24	22	24	31	43	49	51	51	51	51	51	51	49	43	35	31	29	26	24	35	
PK	67	67	67	67	69	67	63	90	53	69	75	84	86	78	73	69	69	73	69	65	69	71	71	67		90

OZONE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDFNTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	104	106	96	96	98	98	94	92	112	118	118	118	124	122	124	122	118	114	108	94	98	98	104	104	108	124
2	108	108	100	116	114	114	88	88	94	108	108	114	114	114	114	108	108	108	104	102	98	98	102	102	106	116
3	104	94	88	112	96	94	82	77	88	98	98	98	98	96	98	94	96	98	96	88	88	96	98	98	94	112
4	96	96	104	96	104	108	92	84	88	102	112	116	118	114	106	118	108	108	104	104	98	96	102	98	104	118
5	98	96	98	94	98	100	96	78	102	104	120	114	104	108	106	106	106	104	98	98	94	102	98	88	100	120
6	88	92	84	77	88	92	96	88	92	102	108	98	108	106	98	96	98	112	104	78	92	84	102	108	96	112
7	6	84	75	77	88	78	84	84	96	104	104	120	124	126	104	94	104	100	96	106	98	94	98	98	94	126
8	110	110	98	98	120	129	(PF)	(PF)	(PF)	(PF)	147	137	145	147	153	137	147	149	131	118	122	118	112	112	123	153
9	112	88	108	118	112	118	92	84	108	118	122	122	112	108	110	108	104	104	104	92	92	88	86	73	104	122
10	71	71	69	71	73	82	88	77	78	84	84	84	84	84	84	82	78	73	75	78	78	75	65	59	77	88
11	78	112	118	98	98	118	108	98	108	104	100	98	98	98	98	98	90	78	73	73	59	59	49	49	90	118
12	39	39	71	49	45	26	39	49	59	65	65	65	65	67	59	59	59	53	47	(RF)	(RF)	(RF)	(RF)	(RF)	53	71
13	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	131	128	120	118	108	102	98	94	88	80	82	80	77	78	93	131
15	78	77	61	61	57	63	59	55	69	88	94	94	94	94	96	96	98	100	98	90	82	80	77	77	80	100
16	84	80	77	75	71	77	71	65	77	90	92	96	96	98	100	100	98	94	92	86	86	86	80	80	86	100
17	71	77	77	80	80	75	61	53	71	78	82	86	90	88	90	92	90	88	86	92	96	96	98	96	82	98
18	92	90	92	96	94	94	88	100	96	90	96	98	(IM)	(IM)	94	96	100	96	77	69	61	57	47	51	84	100
19	59	55	51	53	63	41	59	63	61	(CA)	92	98	100	104	102	100	106	102	92	84	77	59	75	75	77	106
20	80	61	61	69	69	59	57	71	69	75	75	82	(IM)	(IM)	61	63	65	63	63	47	55	57	53	55	65	82
21	49	45	43	39	47	49	45	47	57	61	(CA)	73	73	75	78	94	92	86	77	77	71	67	67	73	65	94
22	61	61	63	73	71	73	67	67	61	67	69	75	75	78	84	88	86	86	84	80	73	69	71	73	73	88
23	77	77	77	77	77	73	77	61	67	75	82	82	84	78	71	63	63	67	61	57	57	59	61	47	69	84
24	51	55	59	53	49	53	47	47	53	59	67	73	77	82	84	86	84	80	80	77	73	61	59	59	65	86
25	61	59	57	55	59	57	55	51	55	61	71	65	67	67	67	71	67	69	57	63	65	65	67	63	63	71
26	53	59	55	69	71	67	69	59	67	71	80	80	84	84	82	82	84	78	75	75	67	67	65	59	71	84
27	67	67	67	67	55	61	65	51	59	63	80	80	86	86	84	90	92	86	86	78	78	75	75	78	75	92
28	75	75	75	75	75	73	67	63	73	77	77	77	78	77	78	80	80	80	75	69	69	65	65	59	73	80
29	63	67	77	71	61	63	59	57	57	67	67	73	75	77	77	77	78	80	77	75	67	63	65	63	69	80
30	63	61	59	63	63	61	67	59	63	69	80	88	86	86	90	88	84	86	78	77	78	73	80	80	75	90
AV	75	77	77	78	78	78	73	69	77	84	94	94	96	96	92	92	92	90	86	82	80	78	78	77	84	
PK	112	112	118	118	120	129	108	100	112	118	147	137	145	147	153	137	147	149	131	118	122	118	112	112		153

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SULFUR DIOXIDE                                                                                                 CB-TRACT
(UG/M3)                                                                                                        TRAILER 23
                                                                                                               SEPT 1978
                                                                                                               OCCIDENTAL OIL SHALE INC.

                                                            HOUR (LOCAL STANDARD TIME)

DAY     1     2     3     4     5     6     7     8     9    10    11    12    13    14    15    16    17    18    19    20    21    22    23    24   AVE  PEAK

  1     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  3     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  4     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  5     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  6     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
  7     0     0     0     0     0     0     0     0     0     0     0     0     0     0  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)     0     0
  8  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)  (PF)     0     0     0     0     0     0 (   )     0
  9     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 10     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 11     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 12     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 13  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM) (   ) (   )
 14  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 15     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 16     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 17     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 18     0     0     0     0     0     0     0     0     0     0     0     0  (IM)  (IM)     0     0     0     0     0     0     0     0     0     0     0     0
 19     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 20     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 21     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0    52     3    52
 22     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 23     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 24     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 25     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 26     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 27     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 28     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 29     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
 30     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0

AV      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     3     0
PK      0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0    52          52
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HYDROGEN SULFIDE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0
8	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	0	0	0	0	0	( )	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	(CA)	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	(CA)	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0

TOTAL HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	900	1000	1000	1000	1000	1000	1000	1000	700	1100	800	800	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	900	1100
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
19	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
20	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
21	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
22	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
23	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
24	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
25	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
26	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
27	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
28	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
29	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
30	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	900	1000	1000	1000	1000	1000	1000	1000	700	1100	800	800	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )		1100

METHANE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	900	900	900	900	900	900	900	900	300	900	500	500	200	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	800	900
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
19	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
20	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
21	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
22	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
23	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
24	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
25	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
26	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
27	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
28	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
29	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
30	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	900	900	900	900	900	900	900	900	300	900	500	500	200	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )		900

NON-METHANE HYDROCARBONS
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	0	100	100	100	100	100	100	100	400	200	300	300	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	100	400
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
19	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
20	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
21	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
22	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
23	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
24	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
25	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
26	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
27	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
28	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
29	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
30	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	0	100	100	100	100	100	100	100	400	200	300	300	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )		400

CARBON MONOXIDE
(UG/M3)

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	0	0	0	0	0	0	0	0	0	0	( )	0
13	0	0	0	0	0	0	0	0	0	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	0
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	200	100	0	0	100	100	100	0	0	0	0	0	0	0	0	200
15	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	(IM)	(IM)	0	0	0	0	0	100	0	0	0	0	0	0	100
19	0	0	0	0	0	0	0	0	0	(CA)	0	100	100	100	0	0	0	0	0	0	0	0	0	0	0	100
20	0	0	0	0	0	0	0	0	0	0	100	200	0	0	0	0	0	100	100	100	0	0	0	0	0	200
21	0	0	0	0	0	0	0	0	(CA)	0	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	100
22	0	0	0	0	0	0	0	0	0	0	0	0	0	(CA)	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	100	0	0	0	100	100	100	100	100	100	100	0	0	0	0	0	0	100
26	0	0	0	0	0	0	0	0	0	100	100	200	200	300	300	300	300	200	200	100	100	100	100	0	100	300
27	0	0	0	0	0	0	0	0	0	0	0	0	100	100	200	200	100	100	100	100	0	0	0	0	0	200
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	100	100	200	300	500	300	200	200	200	200	100	0	0	0	100	500
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AV	0	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	100	100	100	0	0	0	0	0	0	
PK	0	0	0	0	0	0	0	0	100	100	200	200	200	300	500	300	300	200	200	200	100	100	100	0		500

Particulate Data 24-hour Average (UG/M3)

CB-Tract

Occidental Oil Shale, Inc.

Mo	Dy	Yr	TRL20	TRL23	TRL42	TRL56
9	3	78	20.8	16.6	17.4	18.4
9	6	78	15.1	15.4	16.6	16.2
9	9	78	24.2	16.8	16.1	17.4
9	12	78	10.8	8.0	6.2	8.8
9	15	78	12.9	20.6	24.5	40.6
9	18	78	7.9	8.9	7.0	9.0
9	21	78	8.4	6.5	11.4	8.5
9	24	78	0.3	16.8	14.0	18.6
9	27	78	23.4	23.3	16.6	16.0
9	30	78	20.7	12.4	0.8	11.5
		Av	14.4	14.5	13.1	16.5
		Gm	10.0	13.5	10.1	14.7
		Pk	24.2	23.3	24.5	40.6

WIND SPEED
METERS / SEC

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	2	2	2	2	3	2	3	2	(CA)	5	3	3	2	3	4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	3	5
2	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
3	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
4	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	( )
5	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	4	3	4	4	4	4	3	2	1	1	2	2	2	3	4
6	2	2	2	2	2	2	3	2	2	4	4	4	3	(RF)	(RF)	3	3	3	1	2	1	2	2	2	3	4
7	2	2	2	2	2	2	4	3	2	2	2	4	3	3	(RF)	7	7	4	3	4	3	3	2	2	3	7
8	2	2	2	2	4	2	2	2	2	1	(RF)	(RF)	5	4	4	4	4	4	1	1	1	2	3	3	3	5
9	2	2	2	2	1	1	1	2	1	4	4	4	4	5	5	4	4	4	2	1	1	1	2	2	3	5
10	2	2	2	3	2	2	2	3	4	5	5	4	5	6	6	7	6	5	3	4	4	3	2	3	4	7
11	7	5	1	1	4	2	1	1	1	(RF)	(RF)	(RF)	3	5	6	6	5	4	3	1	1	1	0	1	3	7
12	0	1	1	2	2	2	3	3	2	2	3	3	4	4	4	4	2	3	2	1	1	1	1	2	2	4
13	2	2	2	2	3	2	2	2	3	2	2	3	4	(RF)	4	4	4	3	1	1	1	2	2	2	2	4
14	2	2	2	2	2	2	2	2	(RF)	3	3	5	5	4	4	3	3	4	4	3	2	1	1	2	3	5
15	2	2	3	3	3	2	2	2	1	4	(RF)	6	5	6	4	4	4	4	2	1	2	2	2	2	3	6
16	2	2	2	2	2	2	2	2	1	2	2	3	6	6	4	4	4	3	2	1	1	1	2	2	3	6
17	3	1	1	1	1	1	1	1	1	2	5	6	6	6	7	6	5	5	4	4	5	5	6	9	4	9
18	9	5	6	5	4	4	2	1	(RF)	(RF)	(RF)	2	3	3	4	4	4	2	2	1	1	1	1	1	3	9
19	2	2	2	1	1	(MT)	(MT)	2	2	3	2	4	6	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	6
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	0	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	2
21	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	3	2	2	1	1	2	2	2	1	1	3
22	1	2	2	2	2	1	2	2	2	2	3	3	4	4	4	3	2	1	1	1	2	2	2	2	2	4
23	1	2	3	2	1	1	1	2	2	2	1	2	4	3	3	3	3	3	2	2	1	1	2	2	2	4
24	2	2	2	2	2	2	2	1	2	1	1	2	3	4	2	2	2	2	2	2	4	2	2	1	2	4
25	2	2	2	2	2	1	3	4	2	2	2	2	4	3	2	2	2	2	2	2	1	2	2	2	2	4
26	2	2	1	1	1	2	1	1	2	1	1	2	3	3	3	3	2	2	1	2	0	1	1	2	2	3
27	2	2	2	2	2	2	2	1	1	1	1	1	2	3	3	3	3	1	1	1	1	2	2	2	2	3
28	2	2	2	1	1	1	1	1	3	2	2	3	5	5	4	3	3	3	2	1	2	2	2	2	2	5
29	2	2	2	3	1	1	2	2	2	2	2	2	3	3	3	2	3	3	1	1	1	2	1	2	2	3
30	2	1	2	2	2	1	2	2	3	2	0	1	2	2	3	3	2	4	1	2	2	0	2	2	2	4
AV	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	3	2	2	2	2	2	2	3	
PK	9	5	6	5	4	4	4	4	4	5	5	6	6	6	7	7	7	5	4	4	5	5	6	9		9

WIND SPEED @10M
METERS / SEC

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	2	1	1	2	1	1	2	1	6	6	5	6	6	4	1	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	3	6
2	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	2	2	3	4	4	6	5	3	2	1	( )	6
3	3	2	4	4	2	3	1	1	2	4	2	3	3	3	2	2	2	3	1	3	2	1	3	3	2	4
4	1	1	3	1	1	1	1	0	1	2	3	2	3	3	3	3	2	3	3	3	1	1	1	2	2	3
5	0	1	1	1	1	2	1	2	3	6	7	6	6	5	4	5	6	4	4	4	3	1	0	1	3	7
6	1	3	1	1	3	6	6	8	8	7	7	5	4	4	4	5	3	4	4	4	0	2	2	3	4	8
7	1	1	1	1	1	3	2	2	3	4	5	6	6	5	3	5	3	3	4	4	2	1	2	2	3	6
8	3	3	1	1	1	1	(PF)	(PF)	(PF)	2	6	6	7	6	8	6	5	5	2	3	2	2	1	2	4	8
9	0	1	1	1	1	1	1	2	4	6	8	8	8	7	5	7	6	5	2	3	3	3	3	5	4	8
10	3	2	2	3	5	5	5	4	8	8	8	8	10	10	10	9	9	7	7	7	8	4	3	5	6	10
11	7	4	1	1	4	5	2	2	2	2	1	3	2	4	5	4	5	6	3	3	2	2	2	2	3	7
12	1	1	2	2	2	2	1	1	1	1	2	3	3	4	4	3	2	3	3	3	1	1	3	1	2	4
13	3	1	0	1	1	1	1	1	1	2	2	3	2	5	6	6	6	5	5	4	2	2	2	2	3	6
14	2	1	1	1	1	1	1	1	1	1	2	4	7	7	7	7	6	5	5	3	3	2	2	4	3	7
15	7	4	4	4	2	1	2	1	4	4	(CM)	(CM)	4	7	5	5	5	5	5	3	4	6	3	2	4	7
16	1	0	2	1	2	1	1	1	2	2	2	7	8	8	6	7	7	6	4	5	5	4	2	3	4	8
17	1	3	3	2	1	1	2	2	4	7	8	10	9	9	12	13	12	8	6	8	11	12	16	16	7	16
18	15	13	11	12	7	4	4	2	1	2	3	5	5	4	4	4	5	3	2	2	1	1	1	2	5	15
19	2	2	3	3	2	2	2	3	2	2	3	4	6	7	6	4	3	1	2	1	1	0	1	1	3	7
20	1	1	1	0	0	0	1	2	1	1	3	1	2	1	1	2	3	2	1	1	2	1	2	1	1	3
21	1	1	0	1	0	1	1	0	1	1	1	2	3	1	2	4	4	4	3	3	3	3	1	1	2	4
22	1	1	1	2	2	1	1	1	4	7	5	5	5	7	6	5	5	4	2	2	1	0	1	1	3	7
23	1	1	3	1	1	0	0	(CM)	1	1	1	2	2	4	3	4	4	4	4	1	1	1	1	0	2	4
24	0	1	(CM)	0	0	0	0	0	0	0	1	1	2	3	1	1	2	3	3	3	4	2	3	4	2	4
25	4	4	4	2	0	2	1	1	1	1	1	1	4	4	3	3	3	4	2	1	2	0	(CM)	0	2	4
26	0	0	1	0	1	0	1	0	0	1	1	3	4	4	4	4	3	3	2	1	1	0	1	0	1	4
27	0	0	0	0	0	0	0	0	0	1	1	1	2	2	3	3	3	2	1	3	2	1	1	1	1	3
28	1	1	1	1	1	1	1	1	3	5	5	4	6	4	5	5	4	5	3	3	1	1	1	2	3	6
29	0	1	0	1	2	1	0	0	1	1	2	2	3	4	3	4	4	5	2	0	0	2	0	1	2	5
30	0	1	0	0	1	0	0	0	0	0	1	2	2	3	4	3	4	4	1	2	1	1	1	1	1	4
AV	2	2	2	2	2	2	2	2	2	3	4	4	4	5	4	4	4	4	3	3	3	2	2	3	3	
PK	15	13	11	12	7	6	6	8	8	8	8	10	10	10	12	13	12	8	7	8	11	12	16	16		16

WIND SPEED @30M
METERS / SEC

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	3	1	1	1	1	2	1	1	6	5	4	6	5	3	4	2	3	3	4	4	4	2	2	3	3	6
2	3	1	2	1	1	0	1	1	1	1	2	3	4	4	3	2	3	4	5	7	6	3	2	1	3	7
3	3	2	4	4	2	3	3	1	2	4	2	4	3	3	3	2	1	3	1	4	2	1	2	2	3	4
4	1	1	2	1	1	1	0	1	1	2	3	3	2	3	4	2	2	3	3	4	1	1	1	1	2	4
5	1	0	1	1	0	1	1	2	3	6	7	6	5	5	4	5	5	4	4	4	4	1	1	1	3	7
6	1	2	1	2	4	7	7	8	8	6	6	5	4	4	4	4	4	3	4	4	1	2	3	3	4	8
7	2	1	1	3	2	2	3	2	4	3	3	5	4	5	3	4	3	3	4	4	3	3	2	2	3	5
8	3	4	2	2	1	1	(PF)	(PF)	(PF)	1	5	6	6	6	8	7	5	5	8	3	3	1	1	1	4	8
9	1	1	1	1	1	2	1	2	4	6	6	7	7	6	4	7	6	4	3	4	4	4	3	5	4	7
10	5	4	3	4	6	5	5	5	7	8	8	8	8	10	9	9	9	7	6	6	8	4	4	5	6	10
11	7	4	1	2	4	4	2	2	1	1	1	3	2	3	5	4	5	6	3	2	2	2	2	1	3	7
12	1	1	2	3	2	2	1	1	0	1	2	2	3	4	4	3	3	3	3	3	1	1	2	1	2	4
13	2	1	0	1	0	1	1	1	1	1	2	3	2	5	6	5	5	6	4	4	3	2	2	2	3	6
14	1	1	1	1	0	1	1	1	1	1	2	2	8	7	7	6	5	5	8	6	3	2	2	4	3	8
15	8	4	4	4	3	1	2	1	3	6	6	6	7	6	6	6	6	6	5	4	6	7	3	1	4	8
16	1	0	3	1	2	1	0	1	2	2	2	7	6	6	7	7	7	6	5	5	6	5	2	4	4	7
17	1	3	2	1	1	1	2	2	3	2	3	8	8	9	8	10	10	8	5	8	9	11	13	13	6	13
18	13	13	11	11	6	3	4	2	1	2	2	4	4	5	4	5	4	3	2	2	0	1	1	1	4	13
19	2	2	2	2	2	2	2	3	2	2	3	3	6	7	5	4	3	1	1	1	0	0	0	1	2	7
20	1	1	1	0	0	1	1	1	0	1	2	1	2	1	1	2	3	2	1	1	2	2	3	3	1	3
21	1	1	0	1	(CM)	1	1	0	0	1	1	2	2	1	2	4	4	3	4	4	3	2	1	1	2	4
22	1	0	1	1	1	1	1	1	3	6	5	5	5	4	5	6	4	4	3	3	1	0	2	1	3	6
23	1	2	2	1	0	0	0	(CM)	0	0	1	1	2	3	3	3	4	4	4	1	(CM)	0	0	0	2	4
24	(CM)	0	(CM)	0	0	0	0	(CM)	0	0	0	0	1	3	1	2	1	2	4	3	4	3	3	5	2	5
25	4	4	4	3	0	1	2	1	0	1	1	2	4	3	3	4	4	3	3	0	1	0	0	0	2	4
26	0	(CM)	0	1	0	0	0	0	0	1	1	2	4	4	4	3	4	3	2	1	1	0	0	0	1	4
27	(CM)	0	0	0	0	0	0	0	0	1	1	2	1	3	3	3	3	3	2	4	3	1	1	1	1	4
28	1	1	0	1	1	1	1	1	3	4	4	4	4	4	4	4	4	5	5	5	2	1	1	1	3	5
29	0	0	0	1	1	1	0	0	0	1	2	2	2	4	2	4	4	4	2	0	0	1	0	0	1	4
30	0	0	0	0	0	(CM)	0	(CM)	0	0	1	1	2	3	4	3	3	2	0	1	2	0	1	1	1	4
AV	3	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	4	4	4	4	3	2	2	2	3	
PK	13	13	11	11	6	7	7	8	8	8	8	8	8	10	9	10	10	8	8	8	9	11	13	13		13

WIND SPEED @60M
METERS / SEC

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	3	3	2	2	3	4	0	1	6	5	5	6	5	4	4	3	3	3	4	5	5	1	1	2	4	6
2	1	1	1	1	1	1	1	0	1	1	1	2	3	4	3	2	3	4	6	8	7	3	2	2	3	8
3	3	3	4	3	2	3	4	1	2	3	2	3	2	3	2	2	2	2	2	4	2	1	1	2	2	4
4	1	1	2	1	1	1	0	1	1	1	3	3	2	2	3	2	2	2	3	4	1	0	1	1	2	4
5	0	1	1	1	1	1	1	2	3	6	7	6	6	4	4	6	5	4	5	4	4	2	0	1	3	7
6	1	2	1	3	5	8	8	8	8	6	6	6	4	5	4	5	4	4	4	5	1	2	2	3	4	8
7	3	1	1	4	2	2	3	2	3	4	4	4	5	5	4	6	3	3	5	4	3	3	2	1	3	6
8	3	5	2	2	1	2	(PF)	(PF)	(PF)	2	5	6	6	7	7	7	5	5	4	3	4	2	2	1	4	7
9	0	2	1	1	1	3	2	2	4	6	6	7	8	7	4	6	6	5	4	4	5	4	4	5	4	8
10	4	4	4	5	6	6	6	5	8	9	8	8	8	6	6	6	6	7	6	7	8	5	5	5	6	9
11	8	4	1	2	5	4	2	2	1	1	1	3	2	3	4	5	5	6	3	2	2	2	2	1	3	8
12	2	1	1	2	2	2	1	1	1	1	3	2	2	4	4	3	2	3	4	3	2	1	3	2	2	4
13	1	1	0	1	1	1	1	1	1	1	2	3	2	7	6	5	6	5	4	4	4	2	2	2	3	7
14	1	1	2	1	0	0	1	0	0	1	2	4	7	7	7	8	5	6	8	6	3	2	2	6	4	8
15	8	5	4	3	1	1	4	1	3	5	6	7	7	8	5	6	7	7	5	5	7	8	5	1	5	8
16	1	1	3	1	2	1	0	1	2	2	2	6	7	7	7	7	6	6	6	7	7	6	2	6	4	7
17	1	4	2	2	1	1	2	2	3	8	8	9	8	9	10	11	11	7	6	9	10	11	14	13	7	14
18	16	12	11	9	7	5	4	(CM)	1	2	2	4	4	4	4	4	5	3	3	3	1	2	2	3	5	16
19	3	2	3	2	3	2	3	2	2	2	3	4	6	7	6	4	3	1	1	1	0	1	0	1	3	7
20	2	1	0	1	0	1	1	2	1	1	3	1	2	1	1	2	4	2	1	2	3	3	3	3	2	4
21	3	1	0	0	0	0	1	0	0	1	1	2	2	1	2	4	4	4	4	4	3	4	1	1	2	4
22	1	0	1	2	1	1	1	1	4	6	6	5	5	5	5	5	4	5	4	4	4	1	1	1	3	6
23	1	1	1	1	1	1	(CM)	(CM)	0	1	1	1	2	3	4	3	4	4	4	2	0	0	1	0	2	4
24	0	(CM)	(CM)	(CM)	0	0	0	0	0	0	0	1	2	3	1	2	1	2	5	3	5	3	4	6	2	6
25	5	5	5	2	0	1	1	0	1	1	1	2	4	3	3	4	4	4	4	1	1	0	(CM)	(CM)	2	5
26	(CM)	(CM)	0	0	0	1	0	0	0	1	1	3	4	4	4	4	4	4	3	2	1	1	1	(CM)	2	4
27	(CM)	(CM)	(CM)	(CM)	1	0	0	0	0	0	1	1	2	3	3	4	3	3	2	3	5	3	1	1	2	5
28	3	2	1	0	0	0	0	1	4	4	5	4	5	4	5	5	5	6	6	6	3	1	1	1	3	6
29	0	0	0	1	2	1	0	0	0	1	1	2	3	3	3	5	3	5	3	1	0	1	0	0	2	5
30	0	0	0	0	0	0	0	(CM)	(CM)	1	1	1	2	3	4	3	4	4	1	0	1	0	1	1	1	4
AV	3	2	2	2	2	2	2	1	2	3	3	4	4	4	4	4	4	4	4	4	4	3	2	3	3	
PK	16	12	11	9	7	8	8	8	8	9	8	9	8	9	10	11	11	7	8	9	10	11	14	13		16

DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
MRI STATION = 042 PERIOD(9/01/78 TO 9/30/78)

													HOUR												
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	2	2	2	2	2	2	2	2	4	5	6	5	4	4	5	5	4	4	4	3	3	2	2	2	3
2	2	3	2	2	2	2	2	1	1	1	2	3	3	3	3	3	3	4	5	4	3	3	2	2	3
3	3	3	3	3	3	3	2	2	2	2	3	3	3	4	3	3	3	3	2	2	2	2	2	0	3
4	1	2	2	2	2	2	1	1	1	2	3	3	3	2	3	3	2	2	2	2	2	2	2	2	2
5	2	2	3	3	3	2	2	3	4	6	6	6	5	5	5	5	5	4	4	2	2	2	2	2	3
6	2	2	2	2	2	2	3	5	7	6	5	5	5	4	4	5	4	4	3	2	2	2	3	3	3
7	1	1	1	2	2	2	2	3	3	3	5	5	5	5	7	15	8	3	5	3	3	3	2	2	4
8	3	3	3	4	3	2	2	2	2	3	6	5	7	7	7	6	5	4	3	3	2	3	2	2	4
9	2	2	2	2	2	2	2	2	3	7	6	7	7	7	5	7	6	5	4	4	2	2	2	2	4
10	2	3	2	2	2	2	3	4	7	8	8	8	8	10	10	9	9	7	7	7	6	3	4	7	6
11	8	4	2	2	4	2	2	2	2	2	3	3	3	6	7	6	6	4	2	2	2	2	1	1	3
12	1	1	1	1	1	2	2	2	3	3	3	4	5	5	9	3	3	3	1	1	1	1	1	1	2
13	2	2	2	2	2	2	2	2	2	2	3	5	6	5	5	4	4	3	1	1	1	2	2	2	3
14	2	2	1	1	1	1	1	1	1	3	6	7	7	6	5	5	5	8	5	3	3	2	3	3	3
15	4	3	2	4	3	2	2	2	3	6	7	8	5	10	6	7	7	6	4	3	2	2	2	2	4
16	2	2	2	2	2	2	2	2	2	3	4	7	7	6	7	7	5	5	5	4	2	2	2	2	4
17	2	2	2	2	2	2	2	2	3	7	8	8	8	9	10	11	9	6	6	7	8	11	13	13	6
18	10	10	8	6	5	3	3	2	2	2	3	4	4	4	1	4	3	2	2	1	1	1	1	2	3
19	2	3	2	1	1	1	2	3	3	3	4	6	7	7	5	4	2	2	1	1	1	1	1	1	3
20	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2
21	2	2	1	1	1	1	1	1	1	1	2	2	2	2	2	4	4	4	3	3	3	2	2	2	2
22	2	2	2	2	2	2	2	2	3	4	5	5	6	5	5	6	5	4	3	3	2	2	3	2	3
23	2	2	2	2	2	2	1	1	1	2	2	3	3	4	4	5	4	2	1	1	1	1	1	1	2
24	2	2	2	2	2	1	1	1	1	1	2	2	3	3	3	3	3	3	4	5	4	4	3	3	2
25	2	2	2	2	2	3	2	2	2	2	3	4	4	4	4	4	4	3	1	1	1	1	2	2	2
26	2	2	2	2	2	2	2	1	1	1	2	4	4	4	4	4	3	3	2	1	1	1	1	1	2
27	2	2	2	2	2	1	1	1	1	2	2	3	3	4	4	4	2	2	2	2	2	2	2	2	2
28	2	3	2	2	2	2	2	2	3	4	5	6	6	5	5	5	6	4	3	2	2	2	2	2	3
29	2	2	2	2	2	1	1	2	2	2	3	3	4	3	4	4	4	2	1	1	1	2	2	4	2
30	1	1	2	2	2	2	2	1	1	1	2	3	4	4	4	4	4	2	2	2	2	3	3	2	2
MEAN	2	2	2	2	2	2	2	2	2	3	4	5	5	5	5	5	4	4	3	3	2	2	2	2	3

TOTAL NUMBER OF OBSERVATIONS = 720

NOTE: **** = MISSING DATA

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                 DIURNAL VALUES OF WIND SPEED AT 10 METERS(MPS)
                 MRI STATION = 056 PERIOD( 9/01/78 TO  9/30/78)

                                                 HOUR
DAY   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24     MEAN

  1 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  2 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  3 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  4 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  5 *** *** *** *** *** *** *** *** ***   4 *** *** *** *** *** *** *** *** *** *** *** *** *** ***        4
  6 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  7 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
  8 *** *** *** *** *** *** *** *** *** *** ***   3 *** *** *** *** *** *** *** *** *** *** *** ***        3
  9 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
 10 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
 11 *** *** *** *** *** *** *** *** ***   2   3   3   2   3   4   3   4   3   2   1   1   1   1   1        2
 12   1   1   1   1   1   1   1   2   2   2   3   3   3   3   3   2   2   2   2   1   2   1   1   1        2
 13   1   1   1   1   2   1   2   3   2   2   3   3   3   3   3   3   2   2   2   2   2   1   1   1        2
 14   1   2   2   2   2   2   2   2   3   4   4   4   4   4   4   3   3   3   2   2   1   1   1   1        2
 15   2   2   2   2   2   2   2   2   3   4   5   5   5   0   4   4   4   2   1   1   2   3   2   2        3
 16   2   2   1   2   2   2   1   3   1   3   3   6   0   1   2 *** *** *** *** *** *** *** *** ***        2
 17 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***     ****
 18 *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***   4   3   1   1   1   1   1   1   1        1
 19   1   1   1   1   1   1   1   1   2   2   3   4   5   4   2   2   1   1   1   0   4   4   4   4        2
 20   4   4   4   4   4   4   4   0   1   2   1   1   2   2   2   2   2   2   1   1   1   1   1   2        2
 21   1   1   1   1   1   2   1   1   1   2   2   2   2   2   2   2   2   2   2   2   2   2   2   2        2
 22   2   2   2   2   2   2   2   2   2   3   3   3   4   4   4   4   3   2   2   2   2   2   2   2        2
 23   2   2   2   2   2   2   2   2   2   2   2   2   3   3   3   3   3   3   2   2   2   1   1   1        2
 24   2   1   1   2   2   1   1   1   1   1   1   2   3   2   2   2   2   2   3   3   2   2   2   2        2
 25   2   2   2   2   2   2   2   2   2   2   2   3   3   3   3   3   3   2   1   1   1   2   2   2        2
 26   2   2   2   2   1   2   2   2   2   2   2   3   3   3   3   3   3   2   2   2   2   2   2   2        2
 27   1   1   2   2   2   1   1   1   1   2   2   2   3   3   3   3   2   2   2   2   2   2   2   2        2
 28   2   2   2   2   2   2   3   3   3   2   3   3   4   4   3   3   2   2   2   2   2   2   2   2        2
 29   2   2   2   2   2   1   1   1   2   2   2   3   3   3   3   3   3   3   2   2   2   2   2   2        2
 30   2   2   2   1   1   2   2   2   2   1   1   3   3   3   3   3   3   2   2   2   2   1 *** ***        2

MEAN  2   2   2   2   2   2   2   2   2   2   3   3   3   3   3   3   3   2   2   2   2   2   2   2        2

                          TOTAL NUMBER OF OBSERVATIONS = 423

NOTE: **** = MISSING DATA
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WIND DIRECTION
DEGS

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	69	69	69	81	66	97	84	90	84	171	171	216	243	240	231	237	243	243	240	72	75	81	75	60	114
2	67	81	99	81	15	30	360	120	243	243	252	255	228	132	186	138	(VA)	81	100	30	18	30	20	21	66
3	18	96	98	101	78	12	30	81	75	90	(VA)	231	255	243	216	120	120	162	231	15	15	21	15	96	76
4	63	75	61	69	63	9	78	90	96	312	150	(VA)	(VA)	85	249	54	78	37	70	69	15	15	18	0	58
5	15	12	12	75	66	100	350	100	27	135	156	180	162	135	132	168	177	150	135	18	8	15	9	12	82
6	15	81	60	81	81	66	75	75	90	141	150	135	135	108	126	135	165	195	225	(VA)	69	81	81	30	101
7	15	18	15	9	30	33	15	105	81	(VA)	159	165	201	162	216	177	135	81	81	51	27	33	39	7	64
8	33	21	10	30	42	78	24	45	108	93	90	162	162	180	162	162	150	165	177	360	3	30	26	18	75
9	15	9	6	27	73	54	60	87	69	108	147	143	153	153	189	167	163	168	193	93	63	65	69	69	96
10	72	75	75	93	81	77	75	103	90	127	162	135	138	150	143	143	143	137	127	159	117	162	87	255	118
11	247	234	292	345	237	37	90	90	315	193	247	236	243	216	243	216	246	283	285	300	237	300	12	15	267
12	7	28	50	3	20	81	78	105	92	255	242	243	231	231	233	225	225	238	277	90	75	(VA)	82	20	36
13	23	18	18	26	57	18	105	113	103	243	243	270	202	180	171	177	168	178	353	42	33	43	78	81	80
14	78	75	75	81	79	81	77	77	87	247	256	180	174	153	153	156	150	139	133	112	102	91	81	78	112
15	49	58	64	78	112	112	90	103	83	162	188	158	188	198	104	104	104	219	201	90	69	90	96	(VA)	113
16	96	90	97	90	45	48	42	72	58	269	285	218	195	203	198	195	198	158	96	72	78	62	63	48	99
17	94	86	325	18	60	290	277	78	112	135	152	168	178	180	156	153	150	127	60	111	114	114	126	126	122
18	138	127	124	259	285	274	258	270	351	23	49	338	285	296	261	274	266	335	338	105	107	(VA)	1	18	314
19	35	(VA)	345	30	40	85	105	(MT)	260	282	295	290	290	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	100	70	27	(VA)	55	(VA)	(VA)	(VA)	(VA)	(VA)	70	100	115	100	100	105	( )
21	117	80	90	100	105	80	100	98	80	(VA)	267	258	260	(VA)	15	117	174	190	126	90	120	115	100	96	109
22	96	108	108	88	87	87	90	102	108	180	162	189	120	243	249	263	255	217	98	81	81	90	70	93	118
23	105	81	93	134	99	104	70	87	128	120	270	276	270	(VA)	313	300	309	326	9	103	90	99	99	99	83
24	99	105	99	99	97	105	99	103	99	297	283	293	273	270	333	238	285	273	207	59	90	117	111	93	102
25	96	89	93	92	90	90	120	127	127	297	283	265	267	312	350	345	345	352	351	95	90	90	100	100	64
26	105	100	88	81	87	92	98	90	121	97	285	283	308	318	308	315	307	345	37	97	97	96	90	95	66
27	97	96	100	100	103	103	100	81	83	300	300	294	293	297	294	307	307	307	23	93	88	93	100	100	58
28	117	103	96	90	67	79	69	93	113	110	258	267	283	293	276	273	257	229	37	93	96	98	96	90	95
29	105	97	100	117	96	90	90	100	108	300	267	15	315	267	330	345	345	351	30	93	93	96	93	101	64
30	90	96	87	105	90	87	97	90	138	123	307	258	282	293	271	330	18	297	300	98	90	87	87	113	78
PV	70	76	67	72	71	70	73	93	93	170	232	230	229	214	226	196	200	201	81	78	75	76	71	67	85

1770

WIND DIRECTION @10M
.DEGS

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	205	(VA)	20	57	(VA)	22	73	93	216	203	183	230	237	240	300	270	285	243	217	198	195	113	105	115	202
2	108	162	97	213	210	120	73	55	15	350	(VA)	(VA)	(VA)	198	183	318	65	150	143	156	150	96	117	120	125
3	138	162	150	147	135	177	183	(VA)	117	237	(VA)	157	(VA)	290	240	240	240	237	249	203	70	138	153	163	181
4	210	120	216	135	150	218	10	15	75	360	60	157	(VA)	337	216	183	165	157	195	207	127	193	187	222	170
5	357	210	87	225	350	108	255	60	180	207	222	240	187	187	173	207	225	215	213	210	204	(VA)	(VA)	210	205
6	(VA)	213	305	30	190	180	175	190	190	195	192	160	183	162	175	200	210	220	237	205	105	133	120	160	187
7	240	75	90	198	113	135	138	160	225	210	217	192	210	230	129	147	102	93	159	174	143	97	105	75	151
8	117	150	345	195	(VA)	(VA)	(PF)	(PF)	(PF)	247	231	198	210	203	210	210	204	195	195	195	192	82	180	195	195
9	330	15	207	147	(VA)	193	(VA)	69	186	174	195	201	209	204	220	222	213	216	216	204	240	182	174	168	198
10	174	183	180	182	165	163	153	177	189	189	180	195	210	198	189	203	198	198	204	190	213	193	203	315	191
11	307	297	(VA)	315	288	163	275	231	288	347	330	345	300	270	277	276	297	345	350	360	307	243	225	250	294
12	243	187	187	183	210	210	120	75	(VA)	(VA)	297	277	253	268	240	290	283	257	249	330	45	203	247	277	244
13	217	135	(VA)	217	113	157	210	(VA)	60	39	39	352	345	261	243	203	217	217	223	217	210	228	198	205	209
14	217	198	193	(VA)	198	203	318	127	(VA)	37	13	193	210	201	186	203	198	206	180	165	125	132	190	165	195
15	168	188	183	163	87	103	173	108	220	213	210	212	207	255	225	225	250	247	263	307	223	303	315	303	219
16	285	303	350	318	51	330	72	300	245	225	237	247	263	240	240	253	243	246	282	318	337	353	321	357	290
17	323	333	258	252	263	270	273	246	243	252	263	263	263	250	257	240	230	241	263	259	258	258	256	260	269
18	253	255	255	257	246	250	270	261	258	257	267	250	253	230	237	230	240	245	270	277	267	270	285	293	257
19	275	280	265	250	260	255	285	295	290	315	325	310	310	305	300	305	280	250	(CM)	(CM)	(CM)	(CM)	(CM)	(CM)	286
20	(CM)	(CM)	(CM)	(CM)	(CM)	(CM)	(CM)	(CM)	295	30	15	310	90	(VA)	(VA)	345	10	330	15	115	140	160	185	150	38
21	265	355	275	220	25	285	60	355	360	330	243	240	230	235	240	233	235	250	337	12	60	78	5	20	304
22	27	323	342	350	57	45	57	360	255	190	195	200	210	225	200	190	205	205	193	175	20	117	110	125	176
23	125	135	135	195	90	90	205	(VA)	65	7	350	340	5	345	345	330	333	345	345	20	(VA)	235	90	345	18
24	(VA)	45	(VA)	85	355	360	350	(VA)	30	315	285	290	350	335	310	350	260	(VA)	215	70	135	140	165	163	350
25	165	165	165	225	260	150	140	85	360	300	315	350	325	15	350	10	5	5	350	215	210	195	35	337	332
26	15	230	(VA)	240	225	5	(VA)	90	45	360	15	330	5	350	20	345	7	357	15	100	165	180	210	80	11
27	250	360	175	150	320	20	315	355	320	315	350	345	315	320	350	325	340	345	270	203	200	35	90	140	329
28	180	(VA)	123	140	130	105	100	60	195	215	215	285	295	290	250	235	230	220	207	203	213	(VA)	230	228	206
29	(VA)	(VA)	150	110	225	230	230	300	300	300	320	345	325	20	360	345	355	25	25	50	200	217	345	225	318
30	(VA)	210	285	315	215	(VA)	360	(VA)	20	20	15	330	330	345	340	350	300	305	210	195	175	195	213	210	295
PV	227	199	194	198	191	166	170	58	270	281	276	260	264	262	247	257	253	245	240	202	181	174	180	197	237

1771

WIND DIRECTION @30M
DEGS

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	223	203	(VA)	(VA)	199	217	90	100	231	223	225	236	255	275	315	295	295	263	235	210	210	120	123	120	221
2	130	153	127	195	255	100	190	113	23	7	30	210	15	233	195	337	78	155	153	168	172	137	163	147	168
3	143	150	162	150	173	195	193	186	165	233	(VA)	135	(VA)	293	217	258	255	247	270	222	63	97	165	173	189
4	210	173	195	157	137	157	323	360	105	15	60	162	(VA)	353	240	213	180	195	225	230	95	100	108	243	170
5	320	235	135	157	150	135	258	100	193	225	235	243	205	220	203	235	235	237	240	230	230	225	125	(VA)	211
6	200	215	310	215	213	198	198	200	210	215	217	217	230	195	207	217	237	255	247	237	145	213	135	160	212
7	233	120	108	210	187	165	150	170	243	230	222	225	228	243	135	174	120	109	186	192	157	138	135	100	174
8	168	195	350	210	(VA)	(VA)	(PF)	(PF)	(PF)	237	230	220	220	231	225	228	210	225	223	216	215	(VA)	192	162	215
9	17	145	178	192	90	213	195	93	198	197	213	225	223	230	227	227	234	228	235	217	222	207	205	190	205
10	195	213	190	198	190	183	183	193	203	210	198	203	228	228	215	210	213	216	223	213	237	226	237	321	211
11	315	300	345	326	300	180	307	337	300	350	(VA)	330	309	289	278	270	309	350	350	7	310	263	263	255	308
12	290	307	180	183	200	285	90	80	(VA)	327	307	293	265	277	270	309	307	250	258	330	43	45	270	280	287
13	247	223	45	103	223	200	210	110	187	45	63	7	360	270	245	225	255	247	247	237	240	243	237	200	231
14	237	165	187	300	(VA)	(VA)	297	195	95	80	45	(VA)	225	230	210	220	225	220	195	190	157	150	190	187	198
15	185	203	195	180	123	123	190	177	228	225	225	228	228	230	240	234	230	243	252	225	213	215	213	78	209
16	270	300	213	160	252	188	(VA)	120	47	345	347	237	230	225	225	225	230	222	213	222	225	225	210	217	229
17	230	240	330	40	123	(VA)	320	255	230	225	225	235	240	233	220	217	203	195	190	195	200	200	195	198	220
18	203	203	198	205	340	337	327	324	(VA)	97	237	330	345	360	337	345	333	360	355	360	(VA)	313	300	288	320
19	300	295	285	273	276	278	294	303	302	320	340	330	315	330	320	310	315	290	270	245	(VA)	354	(VA)	(VA)	302
20	(VA)	(VA)	325	305	183	(VA)	267	310	315	5	30	335	110	(VA)	(VA)	340	25	345	20	107	140	147	178	178	354
21	(VA)	355	310	220	27	10	35	5	20	355	320	325	360	(VA)	(VA)	203	216	225	222	225	210	207	(VA)	198	294
22	258	60	123	240	165	135	350	60	225	213	213	225	237	243	240	225	220	235	230	210	215	(VA)	120	135	207
23	150	150	163	205	185	120	(VA)	(VA)	80	45	5	5	5	15	360	345	360	5	5	45	(VA)	(VA)	225	360	34
24	(VA)	60	15	345	345	(VA)	10	(VA)	40	325	300	315	350	350	330	10	280	160	240	70	145	155	180	165	350
25	195	185	185	(VA)	270	150	165	135	25	325	330	15	345	30	15	25	25	20	10	20	250	245	10	5	2
26	10	100	180	220	350	330	140	305	85	360	15	347	20	35	20	360	20	15	35	95	165	150	150	30	36
27	(VA)	43	250	207	350	30	40	345	330	350	345	360	335	345	330	5	360	5	10	345	215	235	125	153	350
28	200	210	165	155	155	125	125	135	230	240	245	300	310	300	270	255	270	250	235	230	245	75	295	277	231
29	105	160	180	350	290	260	315	300	320	310	345	20	5	20	20	5	30	45	45	75	110	273	295	290	350
30	200	235	325	105	255	(VA)	60	(VA)	50	30	40	350	350	355	330	20	90	315	255	180	185	190	237	245	322
PV	219	193	194	203	209	176	238	118	240	306	299	283	291	282	263	271	266	254	249	214	193	191	192	198	249

1772

WIND DIRECTION @60M
DEGS

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

	HOUR (LOCAL STANDARD TIME)																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	217	207	195	200	200	217	200	166	223	210	213	225	230	270	300	283	285	250	223	213	210	117	135	130	215
2	120	140	82	145	357	45	100	100	10	360	15	203	(VA)	213	160	315	57	135	132	157	157	137	150	140	116
3	132	127	147	137	165	177	177	180	150	230	235	80	(VA)	295	225	235	255	240	280	232	222	190	140	150	187
4	165	143	173	180	140	108	258	350	80	350	48	165	140	345	203	195	165	190	216	233	(VA)	(VA)	150	210	170
5	193	30	90	165	180	160	258	80	133	210	213	225	193	210	173	213	216	223	227	225	227	225	216	203	199
6	187	180	190	200	198	190	183	193	195	198	197	193	213	170	180	216	233	230	243	236	207	219	120	140	197
7	203	165	200	200	190	180	143	180	225	225	210	213	210	225	183	165	129	127	153	174	150	136	155	125	178
8	170	190	315	217	105	(VA)	(PF)	(PF)	(PF)	235	210	203	203	203	205	210	195	198	205	198	210	188	176	162	198
9	(VA)	162	162	195	210	193	189	90	195	180	207	207	203	225	220	227	217	213	225	213	205	210	207	180	200
10	175	180	180	180	175	170	170	180	207	195	186	190	207	195	207	200	205	203	213	201	230	205	217	310	197
11	307	297	297	300	300	177	246	247	297	360	330	335	270	272	275	277	300	345	352	360	308	267	275	260	296
12	293	305	165	163	180	245	(VA)	75	180	315	293	270	263	255	258	305	293	255	245	335	23	105	270	288	268
13	258	245	215	177	217	213	203	177	203	53	30	340	330	255	333	204	210	216	250	216	255	252	247	237	235
14	216	189	186	237	360	213	295	200	60	97	22	180	207	203	195	203	203	205	192	180	150	143	178	175	190
15	165	184	178	170	125	150	170	173	216	210	203	208	210	220	230	216	203	228	225	230	205	210	210	30	198
16	250	283	207	183	237	190	12	143	43	330	318	230	225	205	216	222	217	207	203	210	215	215	210	212	222
17	203	232	303	27	105	225	303	240	210	213	220	217	213	205	198	198	190	185	175	186	177	183	183	183	204
18	190	192	180	180	325	318	310	(VA)	310	72	225	324	342	345	330	337	330	345	345	350	72	295	300	303	318
19	197	197	285	280	277	230	285	297	295	300	325	313	310	315	309	300	309	276	276	276	247	330	335	335	292
20	295	290	290	280	280	280	290	300	300	295	335	315	315	310	305	310	305	280	(VA)	(VA)	(VA)	(VA)	(VA)	(VA)	298
21	(VA)	(VA)	(VA)	(VA)	(VA)	(VA)	(VA)	315	315	355	15	315	95	(VA)	(VA)	355	355	335	360	75	115	120	130	140	24
22	170	340	275	195	230	335	340	310	30	5	203	210	240	225	195	210	217	210	213	210	210	193	105	120	223
23	138	148	153	198	198	150	(VA)	(VA)	60	60	345	350	350	360	15	350	330	360	358	30	(VA)	345	253	270	5
24	237	(VA)	(VA)	(VA)	300	250	235	260	343	300	300	300	345	345	310	355	273	163	240	60	140	140	165	168	274
25	180	168	165	168	180	147	140	153	360	300	310	330	348	7	350	10	10	5	360	15	255	230	(VA)	(VA)	337
26	(VA)	(VA)	150	235	345	255	113	225	(CA)	335	360	330	5	335	7	355	360	360	18	60	120	135	130	(VA)	8
27	(VA)	(VA)	(VA)	(VA)	315	250	125	280	310	348	337	330	300	335	5	340	345	343	343	230	210	210	90	130	318
28	200	207	200	150	133	147	147	200	215	225	225	273	300	277	260	250	247	230	225	225	230	27	325	292	227
29	260	253	333	350	315	290	315	325	297	285	340	7	345	5	5	350	10	30	35	50	115	285	300	285	332
30	(VA)	240	50	120	270	255	210	(VA)	(VA)	18	25	345	320	345	330	20	(VA)	305	275	183	175	165	235	245	286
PV	201	203	193	190	220	209	215	209	262	295	288	265	265	269	256	267	260	242	246	213	195	188	191	198	241

DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
MRI STATION = 042 PERIOD(9/01/78 TO 9/30/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	87	79	94	99	83	77	115	71	65	229	224	216	260	283	302	293	303	279	240	198	81	120	61	78	104
2	30	91	114	58	47	75	72	64	319	313	334	256	42	147	280	252	100	94	119	148	128	132	146	37	80
3	117	109	107	104	94	96	99	97	76	223	193	105	88	269	281	221	188	229	273	211	80	93	99	78	126
4	104	123	92	76	76	88	87	89	70	305	28	291	185	288	109	136	199	97	216	166	94	96	56	75	99
5	81	96	84	105	122	111	85	73	106	195	220	230	210	251	209	241	237	244	244	202	77	37	81	86	146
6	82	91	101	105	114	86	57	92	170	208	211	230	217	198	208	202	250	252	241	228	68	71	119	93	152
7	94	96	99	63	83	119	127	87	224	209	215	190	211	238	211	211	199	120	120	98	104	120	127	103	139
8	74	87	93	99	86	317	114	78	60	107	176	207	204	198	184	191	199	203	199	175	92	109	97	62	132
9	56	94	93	80	54	75	73	60	73	121	192	206	199	216	200	196	228	233	233	182	176	112	58	78	133
10	67	63	89	97	78	67	111	73	173	136	186	185	186	196	198	186	181	188	189	189	186	186	177	296	153
11	278	260	294	325	290	200	205	212	284	297	286	293	239	244	239	260	295	312	304	339	296	245	237	32	275
12	288	319	130	111	105	151	92	98	146	211	258	256	261	286	284	294	247	266	284	84	32	335	294	69	267
13	48	73	66	59	83	76	101	74	24	37	255	234	236	207	204	220	196	227	279	34	73	110	66	77	90
14	75	60	64	72	84	94	80	57	280	284	260	243	235	214	216	196	205	179	181	156	136	144	39	101	143
15	153	179	107	105	122	98	95	108	286	204	177	176	209	200	230	232	231	241	215	171	122	63	83	50	160
16	76	85	70	49	69	67	62	83	62	292	259	237	195	226	223	229	216	206	191	207	56	64	101	63	117
17	71	134	298	25	78	48	285	224	43	207	217	205	196	189	211	192	192	179	150	171	163	149	158	162	173
18	187	179	164	305	304	301	293	295	121	93	90	311	320	340	300	307	301	342	334	323	126	327	268	263	304
19	248	259	252	249	235	235	246	268	279	282	292	292	289	284	292	293	271	252	235	238	***	***	***	***	265
20	***	302	271	251	154	324	213	280	265	109	28	276	60	302	84	315	312	274	332	108	92	76	69	88	331
21	97	78	47	***	***	***	***	***	236	286	319	317	297	238	317	145	227	213	202	315	110	54	93	40	310
22	82	84	39	89	74	66	28	70	67	211	205	207	184	193	193	227	249	224	200	71	98	105	91	87	124
23	81	69	69	67	56	88	70	55	72	39	324	17	273	321	24	314	295	332	294	129	271	328	71	57	26
24	56	93	67	74	101	73	80	53	268	320	267	266	342	311	328	326	275	164	213	67	91	113	144	151	59
25	139	101	81	83	77	98	88	72	315	238	268	278	283	66	43	24	308	347	323	75	22	66	80	73	43
26	77	77	66	66	75	73	99	82	84	333	92	267	321	319	50	1	309	311	348	116	170	91	73	82	54
27	83	99	72	74	82	71	74	45	264	317	287	324	324	301	338	324	310	308	296	185	64	51	103	70	18
28	81	81	68	72	71	68	83	63	73	225	235	272	257	256	274	255	257	209	206	56	98	76	77	62	89
29	63	69	93	123	294	72	102	88	255	269	300	143	285	318	61	286	337	312	338	92	277	216	100	91	24
30	84	76	72	62	57	89	73	76	76	288	338	281	284	305	301	68	301	300	248	40	102	105	77	71	41
MEAN	82	90	85	77	81	81	90	75	56	251	251	248	247	255	253	249	251	245	242	143	100	95	93	75	125

TOTAL NUMBER OF OBSERVATIONS = 710

NOTE: **** = MISSING DATA

DIURNAL VALUES OF WIND DIRECTION AT 10 METERS(DEG)
MRI STATION = 056 PERIOD(9/01/78 TO 9/30/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
4	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
5	***	***	***	***	***	***	***	***	***	109	139	***	***	***	***	***	***	***	***	***	***	***	***	***	124
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
7	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
8	***	***	***	***	***	***	***	***	***	***	***	186	171	***	***	***	***	***	***	***	***	***	***	***	178
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	59	200	287	325	321	312	320	322	329	294	324	168	227	226	94	300
12	270	171	117	153	118	144	137	74	57	247	62	255	323	315	300	303	278	312	279	179	154	126	179	97	181
13	150	139	124	128	109	118	130	105	81	292	329	80	232	197	193	164	157	221	143	155	155	124	131	140	143
14	114	169	149	146	166	146	151	138	297	313	329	228	196	166	176	141	175	152	175	124	118	165	139	138	158
15	124	126	137	161	165	144	130	103	96	194	172	155	166	190	195	180	190	270	220	180	180	120	130	160	160
16	160	170	175	170	160	180	150	90	80	330	340	250	220	230	250	190	***	***	***	***	***	***	***	***	186
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	290	317	333	206	180	172	153	236	173	218
19	186	298	235	172	310	135	172	334	257	291	325	323	320	315	317	316	250	202	211	145	185	180	320	320	265
20	320	320	320	320	320	320	320	320	210	310	39	158	107	244	325	145	89	243	162	160	159	135	***	***	287
21	***	***	***	***	***	***	***	***	123	180	300	324	287	125	284	236	222	188	157	153	141	127	124	132	176
22	160	184	164	175	159	150	188	186	92	148	195	221	225	224	201	194	198	204	168	142	137	131	146	138	172
23	105	146	149	150	133	144	153	89	75	89	306	317	303	290	305	307	297	312	267	171	182	196	159	152	175
24	144	155	150	156	139	158	150	159	77	288	169	107	296	304	302	270	309	220	236	48	132	143	163	150	167
25	145	138	139	129	137	136	141	120	85	318	335	292	304	108	251	314	298	331	170	195	195	161	169	158	163
26	157	148	140	139	164	173	149	137	79	327	321	297	323	310	241	232	38	292	186	179	178	136	176	133	175
27	170	157	165	145	178	187	179	173	105	326	334	320	315	288	338	316	303	294	187	161	149	157	163	138	193
28	194	148	128	135	149	159	160	103	94	123	171	186	196	229	245	241	251	237	169	157	174	168	148	142	169
29	158	141	153	142	144	161	130	116	124	322	126	189	288	122	248	304	318	331	195	177	180	153	155	143	161
30	159	182	164	160	148	155	164	128	72	311	304	310	323	321	317	293	297	242	169	155	128	164	***	***	194
MEAN	157	159	151	151	150	153	153	117	91	306	312	254	274	255	270	264	274	265	196	161	160	152	162	139	188

TOTAL NUMBER OF OBSERVATIONS = 416

NOTE: **** = MISSING DATA

TEMPERATURE
DEG. C

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	13	12	12	11	10	11	11	14	19	22	23	23	24	23	24	24	24	23	22	18	17	14	13	12	18	24
2	12	11	11	10	9	8	8	13	16	.19	22	24	25	25	24	25	25	25	23	21	19	16	13	12	17	25
3	12	11	12	11	10	10	10	13	18	23	24	24	24	26	26	26	26	26	24	20	17	14	13	12	18	26
4	11	11	11	11	10	10	11	14	18	23	24	25	26	25	26	26	26	24	22	17	16	14	13	13	18	26
5	12	11	11	11	11	13	10	15	23	25	26	26	27	27	27	27	27	27	26	20	17	16	15	14	19	27
6	13	13	13	13	13	13	13	15	22	23	24	24	25	26	26	26	26	26	24	22	18	17	16	17	19	26
7	17	17	16	14	14	14	16	20	21	21	21	23	23	23	24	21	17	16	14	15	16	15	15	14	13	24
8	13	11	11	11	11	10	8	11	15	18	18	19	20	21	22	22	22	22	20	17	14	13	11	11	16	22
9	10	9	8	8	8	8	9	12	14	21	23	22	23	24	24	24	24	24	23	18	17	14	14	13	17	24
10	12	12	10	10	10	10	10	18	19	19	20	20	22	23	24	23	23	23	22	22	22	18	17	16	18	24
11	15	13	12	12	8	8	8	8	9	11	12	12	13	13	14	14	14	12	10	9	9	8	7	7	11	15
12	8	7	6	4	3	2	2	6	8	11	11	13	14	14	14	14	14	14	14	11	7	6	3	3	9	14
13	2	1	1	1	1	1	1	6	10	13	14	14	17	17	18	18	18	17	19	11	8	7	6	5	9	19
14	4	4	3	3	2	1	1	4	10	13	17	19	19	19	20	20	20	19	17	17	16	14	12	12	12	20
15	13	12	10	9	12	8	8	11	16	18	19	20	20	21	22	22	21	21	20	16	13	13	12	12	15	22
16	10	9	8	8	11	7	8	11	16	16	19	21	22	22	23	22	22	21	19	17	14	14	13	13	16	23
17	13	13	13	13	13	12	12	12	13	16	17	18	19	19	19	19	19	18	17	17	17	16	17	17	16	19
18	17	17	16	13	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	( )	17
19	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	4	6	7	8	8	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	( )	8
20	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	3	4	6	6	7	7	8	9	9	9	7	3	2	1	1	-1	5	9
21	-1	-1	-2	-3	-3	-3	-4	-1	5	8	11	13	13	15	17	18	18	17	13	12	6	6	4	2	7	18
22	3	2	2	2	2	2	2	6	10	16	18	19	19	19	19	21	20	19	16	12	10	12	11	7	11	21
23	6	6	6	4	4	4	3	7	11	16	18	19	21	22	23	23	23	22	19	14	12	9	8	7	13	23
24	7	7	6	6	6	6	4	7	12	14	17	18	19	22	22	23	22	21	20	19	19	17	14	12	14	23
25	9	8	8	7	6	6	6	8	12	16	18	19	19	21	21	23	22	22	19	14	12	10	9	8	13	23
26	8	7	7	7	6	4	4	7	13	16	19	23	22	23	23	23	23	23	19	16	12	8	8	7	14	23
27	7	7	6	6	5	4	3	6	10	14	18	21	23	24	24	23	22	22	19	15	13	13	12	9	14	24
28	9	9	8	8	8	8	7	8	13	16	23	23	23	23	23	23	23	23	20	15	14	12	12	12	15	23
29	10	10	9	8	7	6	6	6	11	14	17	19	19	20	20	21	21	21	18	13	10	8	7	6	13	21
30	6	5	4	3	3	3	2	2	6	10	15	17	19	20	21	23	23	23	20	14	12	9	6	8	12	23
AV	10	9	8	8	7	7	7	9	13	16	18	19	20	21	22	22	21	21	19	16	13	12	11	10	14	
PK	17	17	16	14	14	14	16	20	23	25	26	26	27	27	27	27	27	27	26	22	22	18	17	17		27

TEMPERATURE @10M
DEG. C

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	18	18	16	15	15	15	15	18	21	23	23	24	25	25	25	24	24	25	24	20	19	18	18	17	20	25
2	16	17	15	16	13	13	14	17	21	23	24	25	25	25	26	26	26	26	24	21	21	19	19	18	21	26
3	18	17	17	16	16	16	17	18	23	24	25	26	27	26	26	26	27	26	26	22	21	21	21	21	22	27
4	18	18	18	17	18	17	18	18	22	26	27	27	27	28	28	27	27	28	26	23	23	23	22	18	23	28
5	18	18	18	18	18	18	18	20	24	27	27	28	28	28	28	28	28	28	26	24	23	21	21	19	23	28
6	20	18	18	19	18	19	19	21	24	24	24	26	26	27	28	28	28	27	26	23	23	22	21	22	23	29
7	21	20	19	19	19	18	18	20	21	22	23	23	26	26	14	14	14	14	14	13	13	12	13	13	18	26
8	13	13	12	14	17	18	(PF)	(PF)	(PF)	19	20	20	22	22	22	23	23	22	21	18	18	17	17	14	18	23
9	14	14	14	14	14	13	14	17	21	22	23	23	24	24	24	24	24	23	22	18	18	17	18	17	19	24
10	17	16	15	16	16	15	16	19	19	21	20	21	22	23	24	23	23	23	22	22	19	17	17	16	19	24
11	13	10	9	9	7	4	4	6	7	8	8	9	11	13	14	14	13	9	7	6	6	4	4	4	8	14
12	4	4	3	1	1	1	2	3	6	7	8	9	11	12	13	13	13	13	13	12	11	9	6	6	7	13
13	4	4	3	3	3	3	2	1	4	7	8	12	13	14	16	16	17	17	16	16	14	12	12	10	9	17
14	9	8	8	8	8	8	6	6	7	9	14	17	17	18	19	19	19	18	17	14	14	13	13	12	13	19
15	13	12	12	12	8	9	9	13	16	17	18	18	19	20	20	21	20	19	18	16	14	14	13	13	15	21
16	14	13	11	11	9	10	9	11	14	16	18	20	20	21	21	21	20	19	18	16	15	15	14	14	16	21
17	13	14	13	13	12	11	10	9	11	13	15	16	17	18	18	18	17	16	14	15	14	14	15	14	14	18
18	14	14	13	13	3	2	1	0	0	0	2	3	2	3	5	6	6	5	4	3	2	2	2	1	4	14
19	0	-1	-1	-2	-1	-1	-2	-1	-1	0	1	2	2	1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-1	2
20	-2	-2	-3	-2	-2	-2	-2	-2	-1	0	0	1	2	2	4	5	6	5	4	3	2	1	0	0	1	6
21	-1	-2	-3	-2	-2	-2	-3	-1	2	5	8	9	11	13	15	16	16	14	12	10	8	7	7	6	6	16
22	7	7	8	7	6	7	6	8	13	16	17	18	19	20	21	21	21	20	17	14	13	13	12	11	13	21
23	11	11	12	11	11	9	10	11	14	18	19	20	22	23	23	23	23	22	21	19	17	15	13	13	16	23
24	13	12	12	10	10	9	10	10	13	15	16	18	23	23	23	23	23	21	19	19	17	16	15	14	16	23
25	14	13	12	12	11	11	10	12	14	17	18	19	21	22	22	23	23	21	20	18	17	17	14	14	17	23
26	12	13	12	11	11	10	11	11	14	17	19	22	23	22	23	23	23	21	20	18	16	16	15	13	17	23
27	14	13	12	12	9	10	10	11	14	18	21	23	24	24	24	24	23	23	20	18	17	16	14	15	17	24
28	16	16	16	15	15	13	13	14	20	21	23	24	24	24	26	25	24	23	20	18	18	17	18	17	19	26
29	16	16	17	15	12	12	11	12	13	16	17	19	20	21	21	21	21	20	18	17	15	12	12	10	16	21
30	10	8	8	8	8	7	7	7	12	15	14	17	20	22	23	23	23	23	20	18	16	17	16	14	15	23
AV	12	12	11	11	10	10	9	11	13	16	17	18	19	19	20	20	20	19	18	16	14	14	13	13	15	
PK	21	20	19	19	19	19	19	21	24	27	27	28	28	28	28	28	28	28	26	24	23	23	22	22		28

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TEMPERATURE @30M                                                                                CB-TRACT
DEG. C                                                                                          TRAILER 23
                                                                                                SEPT 1978
                                                                                                OCCIDENTAL OIL SHALE INC.

                                                          HOUR (LOCAL STANDARD TIME)

DAY     1     2     3     4     5     6     7     8     9    10    11    12    13    14    15    16    17    18    19    20    21    22    23    24   AVE  PEAK

  1 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  2 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  3 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  4 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  5 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  6 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  7 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  8 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
  9 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 10 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 11 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 12 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 13 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 14 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 15 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 16 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 17 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 18 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 19 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 20 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 21 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 22 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 23 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 24 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 25 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 26 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 27 (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )    22    23    23    23    23    23    22    21    21    18    16    16    16    21    23
 28    17    17    17    16    16    14    14    16    20    21    23    23    23    23    24    24    24    23    21    22    19    18    18    18    19    24
 29    17    17    17    16    14    13    12    12    13    14    17    18    19    19    20    20    20    19    18    17    16    18    12    12    16    20
 30    11    10     9     9     9     7     7     8    11    14    17    19    21    21    22    22    23    22    21    20    18    17    17    16    16    23

 AV (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
 PK    17    17    17    16    16    14    14    16    20    21    23    23    23    23   537    24    24   537    21    22    19    18    18    18          24
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TEMPERATURE @60M
DEG. C

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
2	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
3	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
4	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
5	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
6	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
7	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
8	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
9	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
10	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
11	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
12	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
13	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
14	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
15	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
16	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
17	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
18	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
19	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
24	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
25	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
29	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	
PK	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )		( )

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 042 PERIOD(9/01/78 TO 9/30/78)

	HOUR																								
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	14	12	10	9	8	8	8	12	19	22	23	24	25	24	23	24	25	24	23	19	16	14	12	11	17
2	11	9	8	8	6	6	6	11	18	23	23	25	24	25	26	26	26	27	23	20	19	18	18	15	18
3	13	13	12	9	8	8	8	12	19	23	26	25	27	26	28	28	29	27	24	23	18	14	12	11	18
4	11	11	9	9	8	8	7	11	19	24	26	27	28	27	28	29	28	28	27	22	18	13	13	11	18
5	11	9	9	12	12	13	12	15	22	26	27	28	28	29	29	29	28	28	27	24	19	15	13	13	20
6	12	11	11	11	12	12	12	18	22	23	23	25	27	27	28	28	28	27	26	22	19	17	18	18	20
7	17	16	14	13	12	12	12	14	21	21	22	24	23	24	25	23	14	12	11	11	11	11	11	10	16
8	9	8	8	8	7	7	7	9	14	17	19	19	19	20	22	21	21	21	19	18	14	11	9	8	14
9	7	6	6	6	4	4	6	8	15	21	21	22	22	23	23	23	23	22	20	19	16	12	11	10	15
10	9	8	8	8	7	8	9	12	18	19	18	19	19	21	22	22	23	22	21	19	19	17	16	15	16
11	12	8	8	7	6	2	2	2	3	5	8	6	9	10	12	12	11	9	6	4	4	2	2	2	6
12	4	2	1	-1	-1	-3	-4	0	4	7	6	8	9	11	12	12	11	12	10	8	6	3	1	0	5
13	-2	-2	-3	-3	-5	-5	-5	-1	4	8	11	12	13	14	16	16	16	15	12	11	7	4	2	2	6
14	1	0	0	-1	-1	-1	-2	2	8	12	17	17	17	20	21	20	18	16	13	12	11	11	9	8	10
15	9	8	6	4	4	3	4	7	12	15	18	18	18	18	19	19	18	18	16	14	11	9	9	8	12
16	7	4	4	2	2	1	1	6	11	14	17	18	19	19	18	19	19	18	17	14	12	11	9	9	11
17	9	9	11	9	9	9	7	7	8	11	13	15	15	16	17	17	15	14	12	12	12	12	13	13	12
18	13	12	11	6	1	0	-2	-3	-2	-3	-2	0	0	0	2	3	3	3	3	2	2	2	0	0	2
19	-1	-1	-1	-2	-2	-1	-3	-3	-2	-1	0	2	1	0	-2	-2	-3	-2	-2	-2	-2	-2	-3	-3	-1
20	-3	-3	-4	-4	-4	-3	-4	-4	-3	-1	-1	-1	1	1	3	2	3	3	2	0	-2	-3	-4	-5	0
21	-5	-5	-6	-7	-8	-8	-8	-5	0	3	6	9	10	13	14	17	16	16	12	8	3	2	1	0	3
22	0	0	-1	-2	-2	-2	-1	3	9	14	17	18	19	19	20	20	19	19	16	12	9	7	6	4	9
23	3	2	1	1	1	1	0	3	10	17	18	19	19	21	21	21	19	20	18	15	13	7	6	4	11
24	3	3	3	2	2	2	2	3	11	13	14	18	21	21	21	22	22	20	18	17	16	14	13	9	12
25	8	8	6	5	3	2	2	6	12	14	18	18	19	20	21	21	20	21	19	14	13	7	7	5	12
26	4	3	2	2	3	2	2	3	11	16	19	21	21	21	22	23	22	21	19	16	13	9	6	5	12
27	3	3	2	2	2	2	1	3	12	14	20	21	23	22	22	23	22	23	19	17	12	10	8	7	12
28	5	4	4	4	4	4	3	7	14	20	23	23	22	23	24	24	23	22	19	15	13	12	12	10	14
29	7	7	6	5	4	3	2	4	10	14	17	18	19	20	20	20	19	19	16	14	9	6	4	2	11
30	2	1	1	-1	-1	-1	-1	2	7	13	16	19	19	21	20	21	21	20	17	11	8	7	4	4	10
MEAN	6	6	5	4	3	3	3	5	11	14	16	17	18	19	19	19	19	18	16	14	11	9	8	7	11

TOTAL NUMBER OF OBSERVATIONS = 720

NOTE: **** = MISSING DATA

DIURNAL VALUES OF TEMPERATURE AT 10 METERS(DEG C)
MRI STATION = 056 PERIOD(9/01/78 TO 9/30/78)

HOUR

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
4	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
5	***	***	***	***	***	***	***	***	***	29	31	***	***	***	***	***	***	***	***	***	***	***	***	***	30
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
7	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
8	***	***	***	***	***	***	***	***	***	***	***	21	24	***	***	***	***	***	***	***	***	***	***	***	23
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
11	***	***	***	***	***	***	***	***	***	10	12	10	11	14	14	15	13	10	7	6	4	4	3	2	9
12	2	1	0	-1	-3	-5	-5	0	6	7	9	8	11	12	12	13	13	13	11	6	4	0	-1	-3	5
13	-3	-5	-5	-5	-6	-6	-5	0	6	10	13	14	17	18	18	18	17	16	13	8	3	3	0	0	6
14	-1	-2	-2	-3	-4	-6	-4	1	9	9	15	18	19	20	20	21	19	17	14	13	12	10	7	7	9
15	8	5	4	3	1	2	2	7	14	18	20	21	21	22	22	22	22	20	17	14	10	9	7	6	12
16	4	3	3	2	2	0	1	6	12	16	18	22	22	24	24	24	***	***	***	***	***	***	***	***	11
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	****
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	4	5	4	1	0	1	0	0	-2	1
19	-3	-4	-4	-5	-5	-4	-4	-2	-2	0	1	2	2	0	-1	-2	-1	-2	-2	-2	-1	-2	-3	-3	-1
20	-3	-3	-3	-3	-3	-3	-2	-1	-1	2	0	2	2	4	3	7	5	4	0	-1	-4	-5	-6	-6	0
21	-6	-7	-7	-8	-8	-10	-8	-4	0	7	7	10	11	15	15	18	17	14	8	4	0	0	-1	-3	3
22	-3	-4	-5	-4	-4	-4	-3	1	8	17	18	19	21	22	22	22	21	18	13	9	6	4	3	2	8
23	1	1	-1	-1	-1	-1	-1	3	10	18	21	21	23	22	23	23	22	21	18	12	8	6	3	2	11
24	1	0	0	0	0	0	-1	3	9	12	16	18	21	22	21	24	22	21	17	16	16	14	11	7	11
25	5	3	2	1	0	0	0	4	11	14	18	19	21	22	22	23	23	21	17	12	9	6	4	3	11
26	2	1	1	0	0	-1	-1	3	9	17	19	22	22	22	23	23	22	21	17	12	8	6	4	2	11
27	1	0	0	-1	-1	-2	-1	2	9	13	18	23	24	25	24	23	23	22	17	12	9	8	6	5	11
28	4	4	3	2	2	2	1	6	12	21	24	24	26	24	25	26	25	22	17	13	11	9	8	7	13
29	6	4	3	2	2	0	0	2	9	13	18	19	20	21	21	19	19	18	14	8	6	3	1	0	10
30	0	-1	-2	-3	-4	-4	-5	0	5	12	16	20	20	21	23	22	22	20	14	9	6	4	***	***	9
MEAN	1	0	0	0	-1	-2	-1	2	7	13	15	16	18	18	18	18	17	16	12	8	6	4	3	2	11

TOTAL NUMBER OF OBSERVATIONS = 426

NOTE: **** = MISSING DATA

DELTA TEMPERATURE 60-10 M
DEG. C*100

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	240	200	225	200	160	119	90	20	-50	-75	-62	-75	-90	-55	-85	-55	-66	-50	25	200	200	210	185	219	68	240
2	250	111	281	264	250	260	300	25	-56	-70	-75	-70	-75	-66	-66	-56	-56	-50	10	25	35	45	-15	25	51	300
3	125	160	150	175	125	95	160	25	-45	-56	-56	-56	-75	-86	-75	-56	-56	-45	0	210	195	60	125	145	43	210
4	225	290	245	205	250	175	160	-25	-69	-75	-75	-69	-55	-69	-100	-50	-45	-40	25	250	100	135	200	350	81	350
5	295	275	310	400	270	225	200	64	75	-55	-55	-87	-100	-90	-87	-87	-75	-50	25	210	275	300	195	275	113	400
6	195	315	111	175	150	86	50	-30	-50	-80	-75	-100	-114	-75	-70	-70	-65	-55	0	150	25	-95	-105	-100	7	315
7	125	83	105	150	75	40	100	-20	-55	-57	-67	-81	-69	-68	-20	55	11	25	35	50	75	169	160	193	42	193
8	195	150	145	25	-35	-40	(PF)	(PF)	(PF)	-50	-71	-66	-71	-47	-78	-71	-71	-66	-20	136	175	150	230	230	36	230
9	186	156	220	170	100	240	59	75	-50	-80	-85	-85	-55	-95	-87	-71	-50	-46	31	225	255	237	207	170	63	255
10	248	225	175	117	150	125	-3	-50	-49	-75	-71	-64	-20	-50	-50	-55	-12	-25	-20	-25	-25	66	175	-20	28	248
11	-12	-37	-30	-20	-50	-25	-12	-30	-49	-75	-55	-71	-71	-50	-25	-17	-50	-50	-37	-37	-13	-20	25	35	-32	35
12	30	0	87	76	110	159	75	21	-37	-46	-75	-71	-71	-71	-87	-75	-75	-50	-50	-3	8	71	198	96	9	198
13	96	96	96	109	100	100	242	262	130	-41	-60	-78	-50	-34	-75	-75	-79	-71	-68	-50	28	78	137	162	40	262
14	269	255	212	121	84	159	155	155	109	25	-29	-59	-59	-63	-71	-67	-67	-50	-50	-46	-25	-20	-17	53	41	269
15	71	79	147	67	209	146	250	100	-50	-75	-72	-46	-75	-50	-15	-75	-80	-50	-3	100	96	56	104	87	38	250
16	35	60	115	93	271	115	220	75	-45	-85	-60	-40	-25	-50	-65	-50	-50	-50	25	105	125	145	110	150	47	271
17	91	105	-20	-29	-15	0	20	-35	-47	-40	-60	-15	-20	-35	-20	-70	-70	-50	-20	-15	-15	-20	-20	-20	-18	105
18	-31	-20	-20	-25	-45	-40	0	-20	-25	-25	0	-15	-55	-70	-55	-70	-55	-45	5	10	-5	0	30	42	-22	42
19	-25	-20	0	-15	-25	-25	-20	-55	-55	-60	-75	-69	-83	-69	-30	-306	-135	-75	-25	0	5	35	-20	-20	-49	35
20	-20	20	25	-30	-10	-30	-30	-50	-40	-40	-55	-60	-65	-60	-60	-60	-60	-47	-20	20	40	60	183	225	-7	225
21	195	169	186	100	85	119	165	75	-40	-60	-55	-60	-75	-65	-60	-70	-60	-40	125	183	300	315	180	175	75	315
22	210	100	130	170	269	250	275	155	-30	-60	-50	-50	-50	-89	-69	-56	-50	-31	75	128	156	75	256	256	82	275
23	295	236	206	270	200	289	245	231	6	-50	-56	-64	-69	-75	-89	-69	-50	-14	33	11	111	125	175	186	87	295
24	170	231	199	236	206	245	200	150	11	-25	-11	-56	-72	-71	-71	-50	-39	-25	17	50	19	25	69	131	64	245
25	81	145	167	150	153	125	170	50	-44	-69	-69	-69	-106	-89	-81	-89	-50	0	56	69	106	95	236	228	48	236
26	250	200	178	339	261	172	195	181	-25	-44	-75	-120	-95	-100	-89	-69	-50	-11	36	67	56	50	95	231	68	339
27	172	256	236	225	406	131	225	170	-31	-50	-44	-64	-69	-75	-75	-56	-56	6	106	250	325	275	256	200	113	406
28	175	206	111	131	150	275	306	250	-39	-44	-56	-50	-25	-39	-69	-56	-31	0	170	250	204	131	120	195	95	306
29	120	125	100	195	300	167	181	31	-25	-50	-69	-69	-89	-89	-64	-69	-64	-20	6	75	100	225	156	131	54	300
30	150	295	320	200	200	211	150	150	0	-50	-50	-56	-75	-100	-81	-69	-50	-25	25	181	200	150	175	225	87	320
AV	147	149	147	141	145	129	142	67	-23	-54	-59	-64	-67	-68	-66	-68	-57	-37	17	93	105	105	127	142	46	
PK	295	315	320	400	406	289	306	262	130	25	0	-15	-20	-34	-15	55	11	25	170	250	325	315	256	350		406

BAROMETRIC PRESS
MILLIBARS

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	784	784	784	784	784	784	785	785	785	786	786	786	786	785	785	785	784	784	784	785	785	786	786	787	785	787
2	787	786	787	786	787	787	787	787	788	788	788	788	787	787	787	786	786	786	786	787	787	788	788	788	787	788
3	789	788	787	788	788	787	787	788	788	788	788	787	787	786	786	786	786	786	785	785	785	785	786	786	787	789
4	786	786	787	786	787	788	787	787	787	787	787	787	787	786	785	786	785	784	785	785	784	785	785	785	786	788
5	784	784	784	784	785	785	785	785	785	785	785	784	783	783	783	782	782	781	782	783	782	783	782	782	783	785
6	782	782	781	781	781	782	783	782	782	783	784	783	784	783	782	782	781	782	782	781	782	781	783	783	782	784
7	783	782	781	781	782	781	782	782	782	783	783	784	783	782	783	783	784	787	790	790	790	791	792	792	785	792
8	791	791	794	792	791	791	(PF)	(PF)	(PF)	794	794	793	794	793	791	789	787	784	784	785	785	785	785	785	789	794
9	784	783	784	785	785	786	785	784	785	784	784	784	784	783	783	782	782	782	782	782	782	782	782	782	783	786
10	782	782	781	781	781	781	781	781	781	781	780	779	779	778	777	777	776	776	776	776	776	776	775	775	779	782
11	776	777	777	777	777	778	778	778	778	778	778	778	778	777	777	777	777	777	777	778	778	778	778	778	778	778
12	778	778	778	777	778	777	778	778	778	778	778	777	777	777	777	776	776	776	776	776	775	773	773	773	777	778
13	773	773	773	773	773	774	774	774	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	774
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	781	781	781	781	781	781	781	781	782	782	782	782	782	782	781	782
15	782	782	782	783	783	783	783	784	784	784	784	784	784	784	783	783	783	783	783	783	783	783	783	783	783	784
16	783	783	783	783	783	783	783	783	783	783	783	782	781	781	780	780	779	779	778	778	778	778	778	778	781	783
17	777	777	777	777	776	776	776	776	776	776	775	774	774	773	773	772	772	771	771	771	770	769	769	768	774	777
18	768	768	768	768	769	770	771	772	773	774	774	775	(IM)	(IM)	777	778	778	778	779	779	780	780	780	780	775	780
19	780	781	781	781	781	781	782	782	782	782	783	783	783	784	784	785	785	786	786	786	787	787	787	787	784	787
20	787	787	787	787	787	787	787	787	788	789	789	789	789	789	788	788	788	788	788	788	789	789	789	789	788	789
21	789	789	789	789	789	789	789	789	789	789	789	789	789	788	787	787	786	786	786	787	787	787	787	787	788	789
22	788	788	788	788	788	788	789	789	789	789	789	789	789	789	789	788	788	788	788	789	789	789	790	790	789	790
23	790	790	790	790	790	790	791	791	791	792	792	792	791	791	791	791	791	791	791	791	790	790	790	791	791	792
24	791	791	791	791	791	791	791	791	791	791	791	791	791	790	790	790	789	789	789	789	790	790	790	790	790	791
25	790	790	790	790	790	790	790	790	790	790	790	789	788	788	787	787	786	786	786	787	787	787	787	787	788	790
26	787	787	787	787	788	788	788	788	789	789	789	788	788	787	787	787	787	787	787	787	788	788	788	788	788	789
27	788	788	788	788	788	789	789	789	789	789	789	789	788	788	787	787	787	787	787	787	788	788	788	788	788	789
28	788	788	788	788	788	788	788	788	788	788	788	787	787	786	786	786	785	785	785	786	786	787	787	787	787	788
29	787	787	786	786	787	787	787	788	788	788	788	788	787	787	787	787	787	787	787	787	788	788	788	788	787	788
30	788	788	788	788	788	789	789	789	789	789	789	788	788	788	787	787	787	787	787	787	787	787	787	787	788	789
AV	784	784	784	784	784	784	784	785	785	786	785	785	785	785	784	784	784	784	784	784	784	784	784	784	785	
PK	791	791	794	792	791	791	791	791	791	794	794	793	794	793	791	791	791	791	791	791	790	791	792	792		794

SOLAR RADIATION
LANGLEY

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1	0	0	0	0	0	0	7	23	41	58	70	80	50	55	41	16	25	11	2	0	0	0	0	0	479	80
2	0	0	0	0	0	0	6	23	43	38	53	53	44	23	32	32	21	13	0	0	0	0	0	0	381	53
3	0	0	0	0	0	0	7	22	38	52	64	72	58	49	41	19	23	7	0	0	0	0	0	0	452	72
4	0	0	0	0	0	0	4	16	53	48	48	58	61	53	47	16	13	9	0	0	0	0	0	0	426	61
5	0	0	0	0	0	0	9	25	38	53	65	72	72	68	57	43	27	10	0	0	0	0	0	0	539	72
6	0	0	0	0	0	0	7	22	37	52	64	73	57	47	40	46	24	11	2	0	0	0	0	0	482	73
7	0	0	0	0	0	0	4	21	30	28	50	61	57	49	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	300	61
8	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	68	62	89	84	70	52	28	13	2	0	0	0	0	0	468	89
9	0	0	0	0	0	0	5	19	28	59	65	76	77	73	63	47	29	10	1	0	0	0	0	0	552	77
10	0	0	0	0	0	0	7	22	11	42	40	30	52	67	44	29	25	17	0	0	0	0	0	0	386	67
11	0	0	0	0	0	0	0	4	18	44	22	54	32	47	64	33	23	1	0	0	0	0	0	0	342	64
12	0	0	0	0	0	0	5	17	38	30	42	55	51	47	42	31	22	10	0	0	0	0	0	0	390	55
13	0	0	0	0	0	0	0	8	(IM)	(IM)	(IM)	(IM)	73	68	58	43	27	10	0	0	0	0	0	0	287	73
14	0	0	0	0	0	0	0	2	8	(IM)	39	58	62	57	31	24	6	2	0	0	0	0	0	0	289	62
15	0	0	0	0	0	0	3	15	20	48	56	47	49	75	41	32	31	10	2	0	0	0	0	0	429	75
16	0	0	0	0	0	0	4	15	32	47	59	42	61	52	40	37	26	11	2	0	0	0	0	0	428	61
17	0	0	0	0	0	0	0	4	10	14	58	65	69	68	61	52	30	11	2	0	0	0	0	0	444	69
18	0	0	0	0	0	0	0	0	2	2	5	13	(IM)	(IM)	36	42	20	6	0	0	0	0	0	0	126	42
19	0	0	0	0	0	0	6	11	12	17	31	31	26	11	3	5	6	2	0	0	0	0	0	0	161	31
20	0	0	0	0	0	0	2	2	13	43	9	29	67	47	52	40	17	4	0	0	0	0	0	0	325	67
21	0	0	0	0	0	0	8	24	39	52	63	68	67	65	56	41	24	7	0	0	0	0	0	0	514	68
22	0	0	0	0	0	0	4	16	31	47	58	66	67	64	54	41	26	8	1	0	0	0	0	0	483	67
23	0	0	0	0	0	0	3	16	31	46	58	65	67	64	55	41	25	8	0	0	0	0	0	0	479	67
24	0	0	0	0	0	0	4	14	32	20	19	28	49	51	29	31	16	2	0	0	0	0	0	0	295	51
25	0	0	0	0	0	0	5	17	33	48	59	64	66	61	51	37	18	5	0	0	0	0	0	0	464	66
26	0	0	0	0	0	0	5	17	32	47	58	65	66	59	42	35	19	9	0	0	0	0	0	0	454	66
27	0	0	0	0	0	0	4	17	35	43	54	61	59	63	30	21	23	2	0	0	0	0	0	0	412	63
28	0	0	0	0	0	0	5	18	30	46	57	70	45	40	53	24	13	5	0	0	0	0	0	0	406	70
29	0	0	0	0	0	0	4	16	31	46	56	64	66	61	51	37	20	6	0	0	0	0	0	0	458	66
30	0	0	0	0	0	0	4	16	32	47	58	64	65	60	51	35	19	5	0	0	0	0	0	0	456	65
TL	0	0	0	0	0	0	122	442	798	1117	1448	1646	1724	1628	1335	982	626	225	14	0	0	0	0	0	2107	
PK	0	0	0	0	0	0	9	25	53	59	70	80	89	84	70	52	31	17	2	0	0	0	0	0		89

REL HUMIDITY
PERCENT

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	29	31	34	36	40	45	47	49	50	44	31	29	22	22	21	22	23	23	24	28	33	36	38	39	33	50
2	41	44	45	50	54	56	58	57	48	38	29	25	23	23	23	23	22	22	22	26	32	36	40	44	37	58
3	46	48	51	51	52	54	54	53	46	36	31	28	26	24	25	25	25	25	26	29	34	35	37	37	37	54
4	37	37	39	39	42	43	44	44	43	33	25	23	21	21	20	19	21	21	21	24	29	30	33	35	31	44
5	37	38	39	39	40	40	40	41	36	29	26	24	21	21	20	20	20	20	21	24	29	34	36	38	31	41
6	41	42	45	45	47	46	44	43	39	36	35	35	31	31	29	28	26	26	26	27	33	35	39	42	36	47
7	43	42	44	46	49	52	55	58	55	49	46	44	40	39	38	37	39	62	87	84	81	79	78	76	55	87
8	81	77	78	79	77	68	64	65	58	46	33	31	32	28	27	25	24	25	28	33	41	49	51	54	49	81
9	57	60	64	65	66	67	67	67	59	49	33	29	27	27	23	24	23	23	24	28	33	41	46	46	44	67
10	44	42	44	47	50	50	50	52	50	44	43	39	39	36	31	27	25	26	24	24	26	26	44	48	39	52
11	48	42	46	54	56	60	93	93	91	86	64	55	48	47	38	28	24	23	34	55	64	75	80	81	58	93
12	82	83	83	83	87	89	89	92	77	52	43	40	34	27	24	22	22	22	22	23	27	31	40	47	52	92
13	50	54	60	70	71	74	75	79	74	57	45	37	30	24	22	21	21	21	22	22	24	29	33	37	44	79
14	39	40	42	44	47	50	54	57	55	45	35	29	25	30	28	26	26	26	28	40	52	57	61	66	42	66
15	68	67	67	68	78	78	82	84	84	70	55	42	41	35	32	32	32	34	37	40	45	50	50	50	55	84
16	55	56	60	67	72	78	82	84	71	55	47	39	29	27	26	26	25	25	28	36	41	45	47	50	49	84
17	53	54	55	54	56	59	63	75	89	81	68	55	49	44	41	38	39	46	51	56	48	48	50	49	55	89
18	47	49	52	58	52	81	97	96	96	96	95	95	66	82	74	60	45	37	30	40	51	64	69	72	67	97
19	69	66	66	69	76	77	80	81	77	77	74	70	62	62	70	91	93	93	92	92	92	92	91	91	79	93
20	91	92	92	92	92	92	92	92	92	89	78	74	74	61	53	43	38	37	37	41	43	64	65	67	70	92
21	72	71	74	80	79	80	81	78	79	63	46	35	28	21	19	16	11	8	9	10	20	27	34	38	45	81
22	38	40	40	40	39	43	42	44	47	43	39	39	35	30	27	22	20	19	20	21	28	35	41	45	35	47
23	47	48	41	41	41	41	49	55	56	54	47	34	23	17	15	15	15	15	15	16	19	22	28	33	33	56
24	37	39	41	42	44	45	47	48	50	50	45	35	35	34	31	26	25	25	24	25	32	35	35	36	37	50
25	41	44	47	48	53	55	59	63	65	63	54	45	38	32	30	26	25	24	23	22	24	23	34	40	41	65
26	43	46	47	50	52	54	56	58	60	60	51	41	34	28	22	21	20	19	18	20	21	21	27	32	38	60
27	37	42	45	46	49	51	51	53	54	54	48	38	30	23	22	21	20	20	20	21	21	26	32	35	36	54
28	38	41	41	43	43	44	44	44	45	47	45	36	30	27	23	23	22	22	22	22	24	29	32	33	34	47
29	36	37	39	41	41	43	45	48	53	55	53	44	28	26	25	24	23	22	23	27	30	35	41	44	37	55
30	45	48	50	52	55	57	59	60	57	48	38	32	26	23	20	17	17	17	17	17	21	26	29	30	36	60
AV	50	51	52	55	57	59	62	64	62	55	47	41	35	32	30	28	27	28	29	32	37	41	45	48	45	
PK	91	92	92	92	92	92	97	96	96	96	95	95	74	82	74	91	93	93	92	92	92	92	91	91		97

PRECIPITATION
CM *100

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1																										
2																										
3																		(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)		
4	3	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3						(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	(TR)	3			3	3
5																										
6																										
7																		3	3	(TR)					5	3
8																			(TR)	(TR)	(TR)	(TR)	(TR)			
9																										
10																					(TR)	(TR)	(TR)	(TR)		
11	3	(TR)	(TR)	(TR)	3	15	10																		30	15
12																										
13																										
14																										
15																										
16																										
17	(TR)	3		(TR)	3																				5	3
18					48	28	10	3	8																97	48
19															5	13	10	3							30	13
20				3														(TR)	(TR)	(TR)	3				5	3
21																										
22																			(TR)	3					3	3
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										
TL	5	3		3	53	43	20	5	8						5	13	10	5	3	3	3	3			183	
PK	3	3		3	48	28	10	3	8						5	13	10	3	3	3	3	3				48

PRECIPITATION
CM *100

CB-TRACT
TRAILER 23
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	TL	PEAK
1																										
2																										
3																										
4																										
5																										
6																										
7																(TR)	3								3	3
8																										
9																										
10																										
11					(TR)	20																			20	20
12																										
13																										
14																										
15																										
16																										
17																										
18					18	36	8	5	(TR)	13	13														91	36
19																										
20									15	10															25	15
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										
TL					18	56	8	5	15	23	13						3								140	
PK					18	36	8	5	15	13	13						3									36

Evaporation Data

C-b Tract
Trailer 23
Sept. 1978
Occidental Oil Shale, Inc.

Sample Period	Total Evaporation (cm)	Precipitation (cm)	Total Wind (km)	Max. Temp. (c)	Min. Temp. (c)
8/31-9/1	1.33		255.0	32	11
2- 6	4.21		403.3	32	10
7- 8	1.16	.03	178.9	31	10
9- 13	2.97	.20	599.4	35	2
14- 15	1.38		264.5	36	10
16- 18	.07	.91	509.5	30	0
19- 20	.75	.25	130.4	10	5
21- 22	.10		73.4	25	5
23- 25	2.31		214.1	30	5
26- 27	.99		101.8	28	5
28- 29	1.13		146.7	30	5
9/30-10/3	2.20		303.0	27	3

MIXING HEIGHT
METERS

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
2	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
3	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
4	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30	30
5	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
6	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
7	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
8	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
9	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
10	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
11	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
12	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
13	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
14	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
15	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
16	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
17	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
18	30	30	30	30	30	30	30	30	(OS)	200	60	180	420	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	71	420
19	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	40	150	120	30	30	30	30	30	44	150
20	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
21	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
22	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
23	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
24	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
25	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30
26	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
27	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
28	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
29	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
30	30	30	30	30	30	30	30	30	30	30	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	(OS)	30	30	30	30	30	30	30	30
AV	30	30	30	30	30	30	30	30	30	( )	( )	( )	( )	( )	( )	( )	( )	( )	35	30	30	30	30	30	32	
PK	30	30	30	30	30	30	30	30	30	200	60	180	420	( )	( )	( )	40	150	120	30	30	30	30	30		420

INVERSION HEIGHT
METERS

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVE	PEAK
1	310	420	500	540	550	510	450	410	220	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	250	500	590	580	610	460	610
2	540	420	370	410	350	360	360	310	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	240	310	320	370	370	338	540
3	330	360	260	570	500	480	420	270	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	280	340	380	340	340	362	570
4	400	430	420	400	450	490	330	350	300	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	160	240	320	360	370	400	336	490
5	400	400	390	360	380	340	350	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	230	350	350	370	390	351	400
6	400	400	440	460	490	370	370	270	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	300	390	260	290	270	344	490
7	320	470	510	500	370	270	310	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	370	270	280	370	450	365	510
8	290	270	430	450	390	420	390	330	170	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	220	330	370	330	350	339	450
9	360	360	450	510	510	470	450	360	190	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	140	310	340	310	350	365	510
10	410	420	420	440	400	390	400	350	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	180	310	280	130	309	440
11	30	30	30	30	30	450	310	140	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	50	80	230	300	130	142	450
12	30	60	300	330	330	460	440	350	140	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	50	200	310	380	350	300	269	460
13	360	470	440	400	410	370	340	290	90	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	150	250	290	270	290	370	319	470
14	330	370	350	310	340	350	370	330	290	60	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	30	100	410	450	510	307	510
15	350	210	290	270	370	390	330	410	200	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	50	300	400	430	430	316	430
16	390	400	510	500	440	410	350	270	100	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	90	210	350	500	400	380	353	510
17	360	310	210	170	230	270	300	430	230	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	30	30	30	30	30	190	430
18	30	30	30	400	760	590	340	190	(NV)	510	410	450	700	(NV)	(NV)	(NV)	(NV)	(NV)	50	190	320	300	290	290	327	760
19	390	400	490	370	270	190	260	230	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	180	310	260	420	640	640	560	550	385	640
20	520	420	410	380	310	480	580	630	370	160	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	90	250	330	380	370	360	373	630
21	330	350	440	510	500	410	420	340	210	40	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	130	290	310	320	290	310	325	510
22	290	330	340	400	490	530	570	450	280	30	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	70	320	510	520	460	450	378	570
23	450	350	390	450	440	430	410	330	280	130	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	100	260	330	350	330	290	333	450
24	320	310	350	340	330	330	310	270	120	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	170	110	120	150	190	233	350
25	250	220	230	340	310	240	250	350	250	40	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	200	370	320	290	310	265	370
26	310	280	370	420	360	300	340	330	150	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	40	220	350	370	290	320	297	420
27	280	350	330	320	330	340	370	350	250	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	80	230	340	390	380	340	312	390
28	270	360	320	310	300	370	490	460	300	40	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	50	260	430	360	260	250	302	490
29	300	330	370	350	380	380	370	400	290	70	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	240	270	230	250	310	294	400
30	300	340	310	310	360	320	320	330	220	60	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	(NV)	110	210	250	270	280	270	266	360
AV	322	329	357	385	389	390	378	334	215	( )	( )	( )	( )	( )	( )	( )	( )	( )	103	214	311	347	335	335	319	
PK	540	470	510	570	760	590	580	630	370	510	410	450	700	( )	( )	( )	180	310	260	420	640	640	580	610		760

STABILITY CLASS 0=STB 1=UNST
@50 METERS

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
11	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
12	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
PV	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0

STABILITY CLASS 0=STB 1=UNST
@200 METERS

CB-TRACT
TRAILER 20
SEPT 1978
OCCIDENTAL OIL SHALE INC.

HOUR (LOCAL STANDARD TIME)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	PREV
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
10	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1
11	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1
12	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1
15	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
16	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1
17	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	1
19	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
26	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
PV	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0

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C-B PIBAL SOUNDING

SOUNDING DATE  9- 1-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION          AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0             42.5       -0.1          0.0
   0.5         273.0       38.5             40.2        2.7         16.4
   1.0         305.0       59.3             38.3        7.1         17.7
   1.5         345.5       51.2             36.3        9.5         17.7
   2.0          15.3       42.3             37.2       10.0         18.4
   2.5          30.6       35.7             39.3       11.6         19.8
   3.0          37.2       32.8             41.0       12.0         19.1
   3.5          41.8       31.1             42.3       13.6         18.5
   4.0          45.7       31.1             44.0       14.6         17.9
   4.5          49.1       29.2             46.0       14.9         17.3
   5.0          53.4       27.6             48.3       15.6         16.7
   5.5          54.5       26.8             49.5       15.5         16.0
   6.0          56.5       25.6             51.1       15.8         15.4
   6.5          58.5       24.5             52.5       15.9         14.8
   7.0          60.0       23.7             53.8       15.8         14.2
   7.5          61.1       22.9             55.1       16.0         13.6
   8.0          62.5       22.4             56.3       16.0         13.0
   8.5          63.6       21.8             57.6       16.1         12.3
   9.0          64.6       21.2             58.7       16.0         11.6
   9.5          65.3       20.7             59.4       15.8         11.0
  10.0          65.9       20.4             60.1       15.9         10.3
  10.5          66.5       19.9             60.8       15.8          9.6
  11.0          66.8       19.4             61.4       15.6          9.0
  11.5          66.8       19.1             61.6       15.5          8.3
  12.0          66.4       18.7             61.4       15.4          7.6


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        24.3        4.3
     2         4.4        4.8
     3        25.4        5.6
     4        16.2        6.5
     5        22.0        8.0
     6        31.6        8.9
     7        11.5       10.5
     8        16.8       11.4
     9        55.5       12.7
    10         2.1       14.7
    11        73.3       15.5
    12        66.1       17.4
    13        10.5       19.0
    14        18.5       20.2
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1793

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16         1.8        23.8
17         3.5        26.2
18         5.2        28.1
19         0.7        29.1
20        29.7        30.9
21        58.6        32.6
22        38.5        34.8
23        39.5        36.2
24        91.0        37.7

      HEIGHT   DIRECTION   SPEED   TEMP
       FEET     DEGREES    FT/SEC  DEG C

        211.      125.        5.9  16.4
        600.      187.       11.1  17.7
        869.      213.       18.1  17.7
       1046.      229.       25.1  18.4
       1376.      235.       22.9  19.8
       1527.      236.       23.5  19.1
       1953.      240.       23.0  18.5
       2217.      248.       21.3  17.9
       2464.      248.       31.7  17.3
       2867.      249.       26.6  16.7
       2988.      248.       26.1  16.0
       3345.      249.       33.5  15.4
       3596.      254.       27.2  14.8
       3761.      251.       34.4  14.2
       4187.      252.       34.3  13.6
       4368.      255.       34.7  13.0
       4778.      253.       40.7  12.3
       5042.      257.       27.9  11.6
       5132.      256.       26.4  11.0
       5426.      254.       33.0  10.3
       5649.      252.       37.2   9.6
       5924.      249.       34.3   9.0
       6110.      241.       27.9   8.3

      HEIGHT   DIRECTION   SPEED   TEMP
      METERS    DEGREES    M/SEC   DEG C

         64.      125.        1.8  16.4
        183.      187.        3.4  17.7
        265.      213.        5.5  17.7
        319.      229.        7.7  18.4
        419.      235.        7.0  19.8
        466.      236.        7.2  19.1
        595.      240.        7.0  18.5
        676.      248.        6.5  17.9
        751.      248.        9.7  17.3
        874.      249.        8.1  16.7
        911.      248.        8.0  16.0
       1020.      249.       10.2  15.4
       1096.      254.        8.3  14.8
       1146.      251.       10.5  14.2
       1276.      252.       10.5  13.6
       1331.      255.       10.6  13.0
       1456.      253.       12.4  12.3
       1537.      257.        8.5  11.6
       1564.      256.        8.0  11.0
       1654.      254.       10.1  10.3
       1722.      252.       11.3   9.6
       1806.      249.       10.5   9.0
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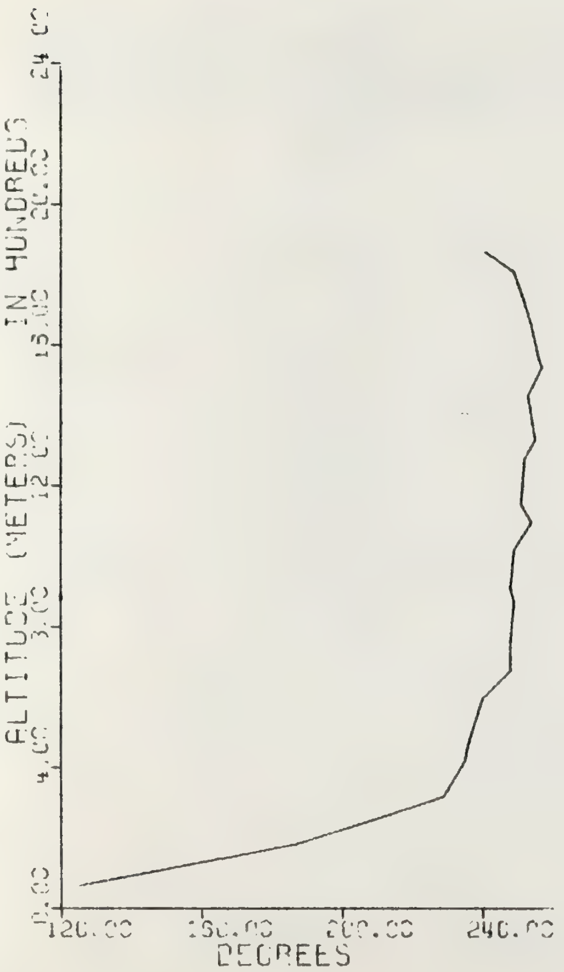
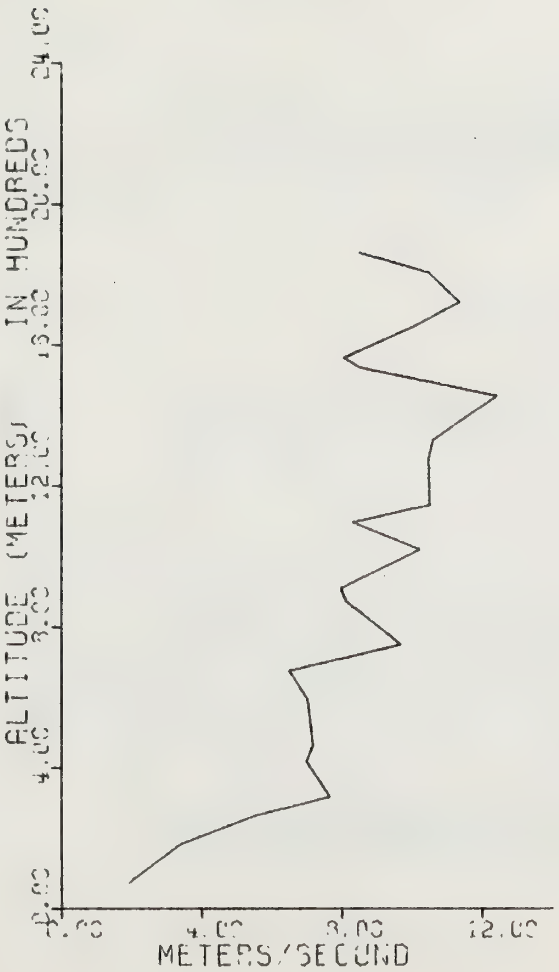
C-B PIBAL SOUNDING

TIME 700   DATE 8/1/78

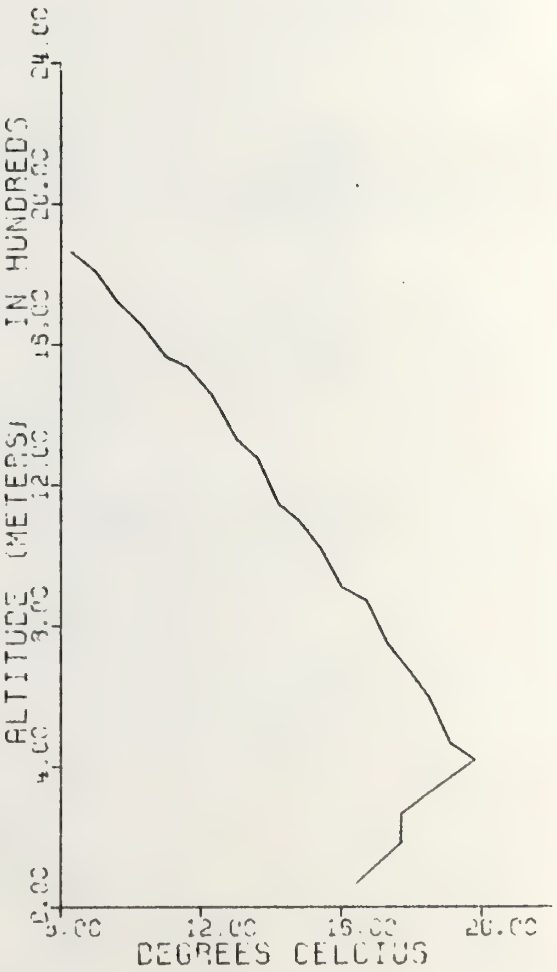
WIND DIRECTION



WIND SPEED



TEMPERATURE

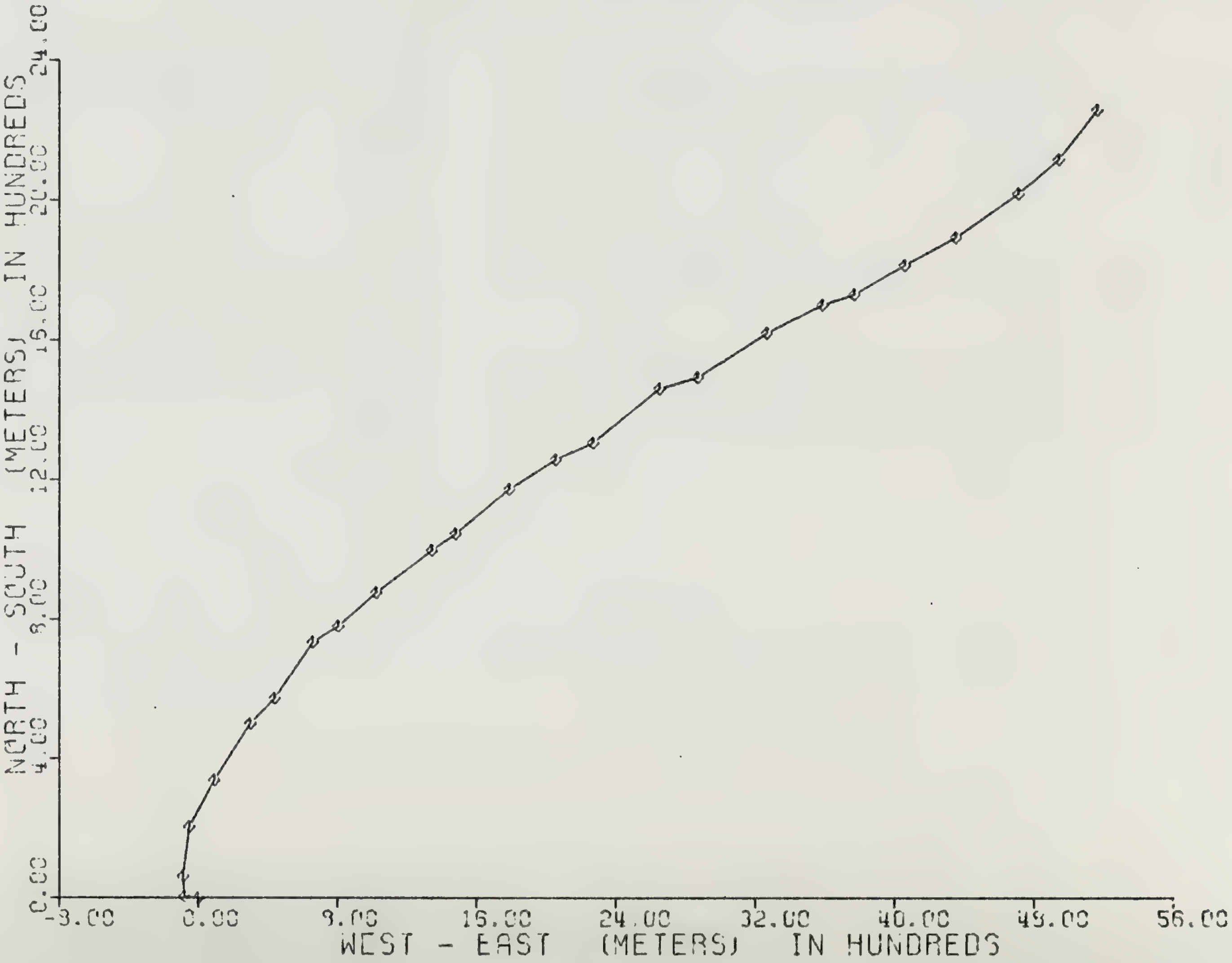


C-B PIBAL SOUNDING

TIME 700 DATE 9/1/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 1-78

BALLOON RELEASED 1430 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                  THEODOLITE #1              THEODOLITE #2

   TIME        AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0             0.0        0.0             42.5       -0.1        0.0
   0.5           102.0       22.3             47.6        1.9        0.0
   1.0            96.7       24.2             50.3        4.2        0.0
   1.5           101.0       22.7             55.0        6.2        0.0
   2.0           100.0       19.8             59.7        7.4        0.0
   2.5           100.0       18.9             62.8        8.1        0.0
   3.0           100.0       19.0             65.4        9.1        0.0
   3.5           100.5       19.7             67.8       10.3        0.0
   4.0           100.2       20.5             70.0       11.7        0.0
   4.5           100.1       22.1             71.8       13.4        0.0
   5.0            99.8       23.5             73.2       14.9        0.0
   5.5            98.8       24.0             74.1       15.7        0.0
   6.0            98.3       24.9             74.9       16.8        0.0
   6.5            97.4       26.5             75.5       18.5        0.0
   7.0            95.5       28.4             75.4       20.3        0.0
   7.5            93.6       30.2             75.1       22.1        0.0
   8.0            92.0       32.2             74.6       23.9        0.0
   8.5            88.4       35.3             72.5       26.3        0.0
   9.0            85.7       36.5             71.2       27.3        0.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        34.7        4.9
     2         1.3        5.6
     3        19.7        6.4
     4        28.4        7.6
     5        16.6        8.5
     6        16.1        9.4
     7        16.4       10.2
     8        28.3       11.3
     9        29.4       12.4
    10        25.4       13.4
    11        12.7       14.4
    12        17.4       15.4
    13        31.1       16.6
    14        26.7       18.0
    15        36.1       19.4
    16        35.0       20.6
    17        17.0       21.7
    18        20.9       22.8
   FEET     DEGREES    FT/SEC DEG C

    205.      277.       15.0    0.0
    404.      281.       15.8    0.0
    613.      283.       21.9    0.0
    804.      279.       21.8    0.0
    952.      281.       18.2    0.0
   1142.      282.       17.4    0.0
   1370.      281.       18.8    0.0
   1666.      279.       19.5    0.0
   2033.      279.       17.8    0.0
   2400.      273.       17.7    0.0
   2692.      271.       16.9    0.0
   3023.      268.       17.1    0.0
   3527.      259.       19.7    0.0
   4135.      251.       21.1    0.0
   4793.      246.       18.1    0.0
   5427.      218.       16.2    0.0
   6240.      209.       18.7    0.0


  HEIGHT   DIRECTION   SPEED   TEMP
  METERS    DEGREES    M/SEC   DEG C

     62.      277.        4.6    0.0
    123.      281.        4.8    0.0
    187.      283.        6.7    0.0
    245.      279.        6.6    0.0
    290.      281.        5.5    0.0
    348.      282.        5.3    0.0
    417.      281.        5.7    0.0
    508.      279.        5.9    0.0
    620.      279.        5.4    0.0
    732.      273.        5.4    0.0
    821.      271.        5.2    0.0
    921.      268.        5.2    0.0
   1075.      259.        6.0    0.0
   1260.      251.        6.4    0.0
   1461.      246.        5.5    0.0
   1654.      218.        4.9    0.0
   1902.      209.        5.7    0.0
```
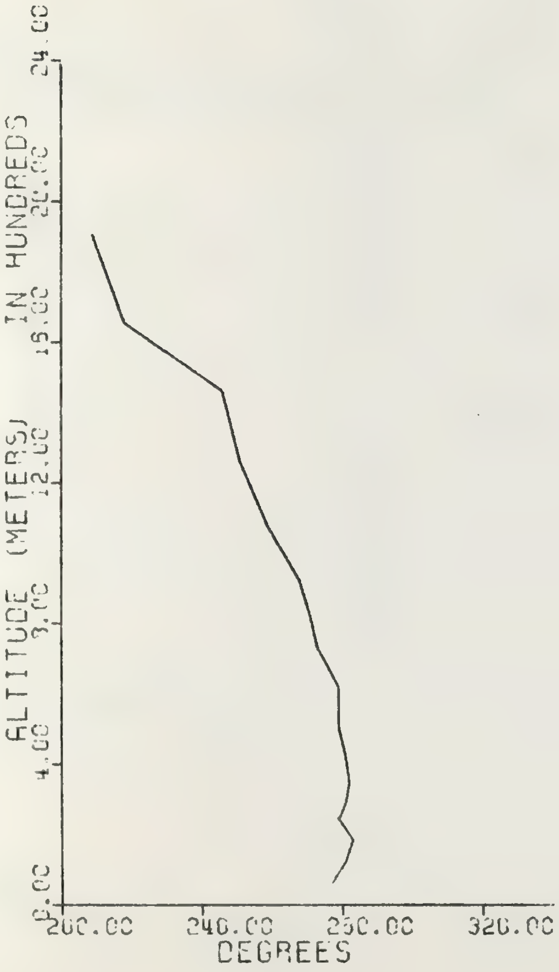
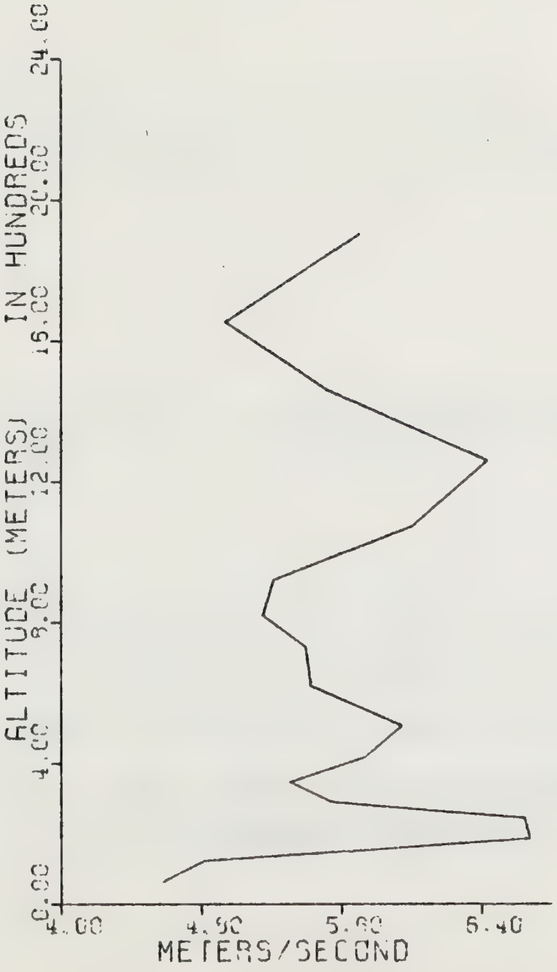

C-B PIBAL SOUNDING

TIME 1430 DATE 9/1/78

WIND DIRECTION



WIND SPEED



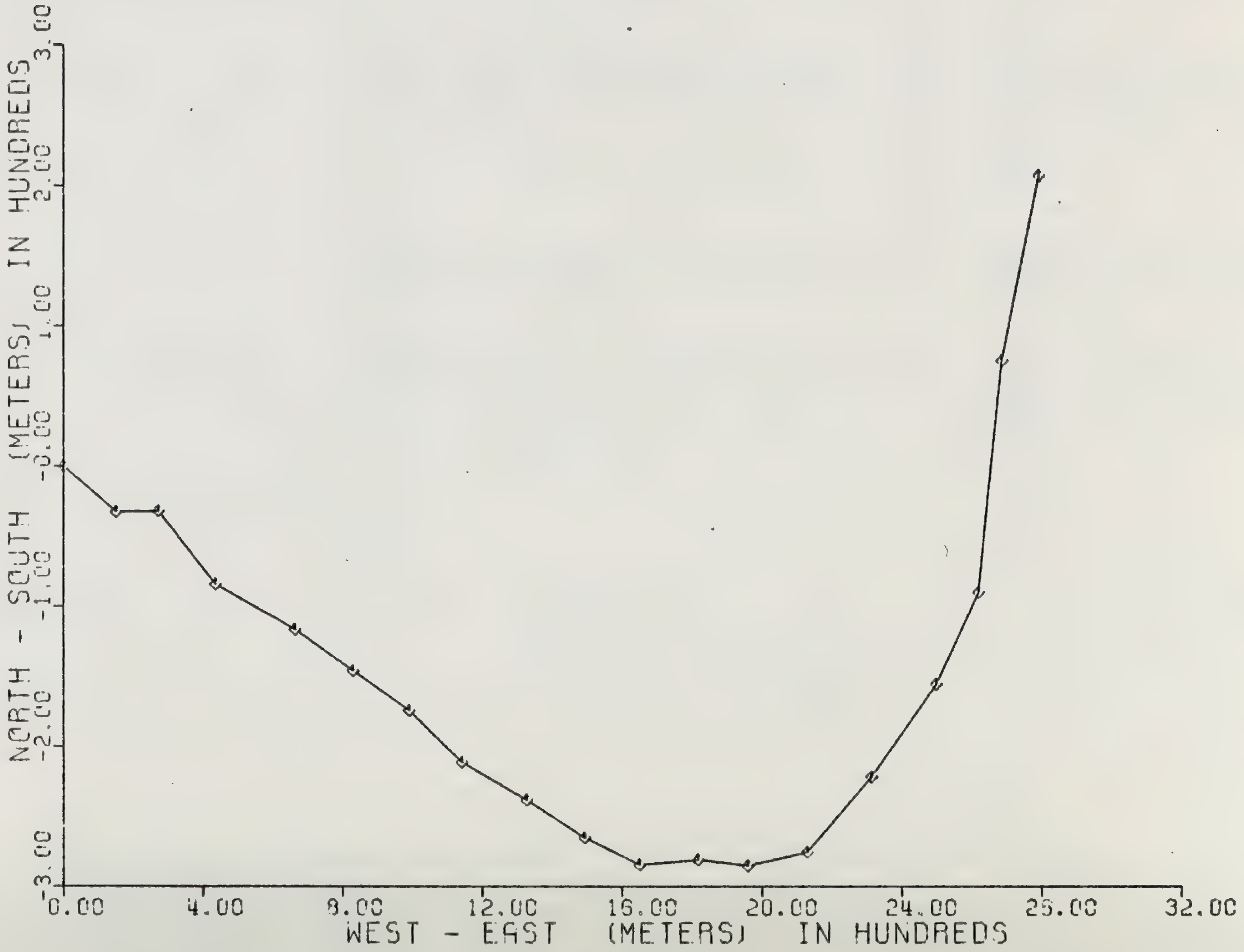
TEMPERATURE

C-B PIBAL SOUNDING

TIME 1430 DATE 9/1/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 5-78

BALLOON RELEASED  700 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1               THEODOLITE #2

  TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0           0.0        0.0            42.5       -0.1         0.0
  0.5          20.1       75.0            42.2        2.8        22.6
  1.0         351.1       70.0            40.8        4.8        22.6
  1.5         334.5       61.7            38.3        7.6        22.7
  2.0         338.7       52.4            35.1       10.3        22.8
  2.5         334.3       46.6            30.1       12.7        22.2
  3.0         330.0       42.5            26.1       14.4        21.7
  3.5         328.0       40.9            23.2       15.7        21.2
  4.0         326.1       39.6            20.7       17.1        20.6
  4.5         324.4       39.9            18.7       18.4        20.1
  5.0         323.1       38.7            16.0       19.8        19.6
  5.5         323.2       38.6            13.3       20.8        18.8
  6.0         325.2       37.6            11.8       21.7        18.0
  6.5         327.7       36.8            10.7       22.1        17.3
  7.0         330.7       36.5            10.1       22.7        16.5
  7.5         333.3       36.3             9.6       23.2        15.8
  8.0         335.7       36.0             9.3       23.6        15.0
  8.5         338.3       35.8             9.1       23.9        14.3
  9.0         341.1       35.7             9.6       24.2        13.5
  9.5         343.5       35.6             9.8       24.5        12.9
 10.0         346.9       34.9             9.9       24.6        12.5
 10.5         347.7       34.2             9.6       24.6        12.1
 11.0         348.6       33.8             9.4       24.6        11.6
 11.5         349.6       33.4             9.1       24.6        11.2
 12.0         351.7       32.8             9.0       24.7        10.6


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME        RHO        ERROR

    1         0.3         4.5
    2        25.1         4.7
    3        25.8         5.0
    4         9.2         5.6
    5        62.8         6.3
    6        51.9         6.8
    7        61.0         7.3
    8        30.7         7.7
    9        47.4         8.0
   10        10.6         8.5
   11        72.3         9.1
   12        19.4         9.8
   13         6.8        10.4
   14        11.6        11.2
 16       31.8       12.8
 17       20.5       13.7
 18       39.6       14.4
 19       38.4       15.3
 20       24.2       16.8
 21       55.7       17.6
 22       51.6       18.4
 23       30.5       19.4
 24       15.3       21.3


         HEIGHT   DIRECTION   SPEED  TEMP
          FEET     DEGREES   FT/SEC DEG C

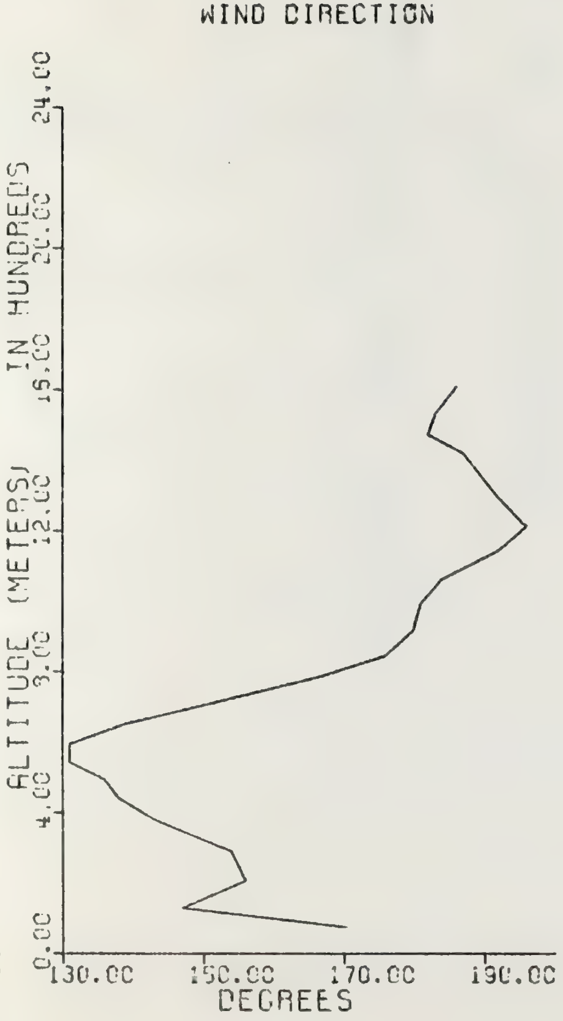
           246.      171.       2.6  22.6
           426.      147.       5.4  22.6
           679.      156.       9.7  22.7
           952.      154.      13.9  22.8
          1250.      143.      14.7  22.2
          1449.      138.      11.9  21.7
          1620.      136.       9.7  21.2
          1784.      131.       8.0  20.6
          1955.      131.       8.8  20.1
          2144.      139.      11.0  19.6
          2376.      154.      11.5  18.8
          2583.      167.      12.3  18.0
          2771.      176.      13.0  17.3
          3012.      180.      13.6  16.5
          3254.      181.      13.5  15.8
          3485.      184.      14.5  15.0
          3747.      192.      14.6  14.3
          3974.      196.      14.6  13.5
          4239.      192.      21.7  12.9
          4652.      187.      21.0  12.5
          4826.      182.      13.8  12.1
          5014.      183.      15.6  11.6
          5266.      186.      25.8  11.2

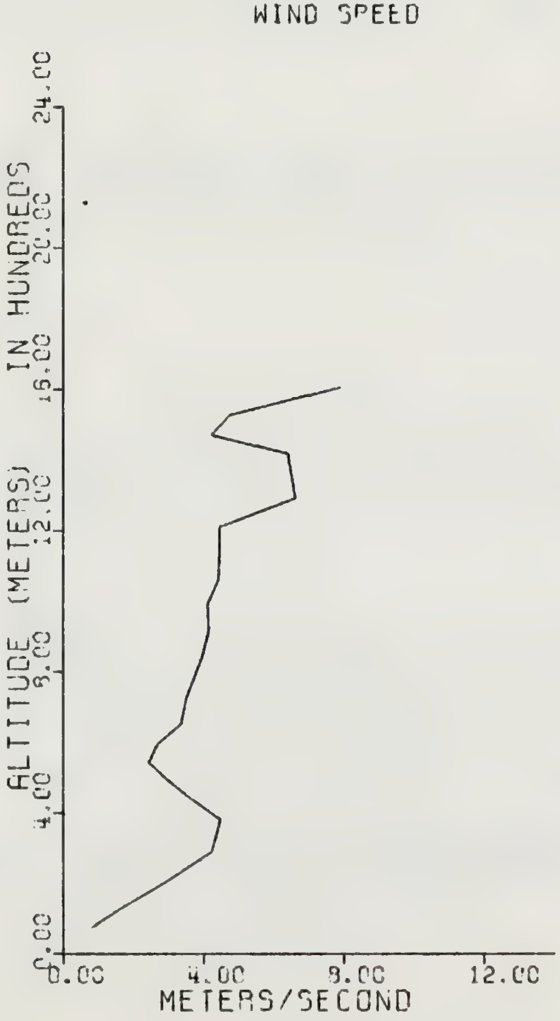

         HEIGHT   DIRECTION   SPEED  TEMP
         METERS    DEGREES    M/SEC  DEG C

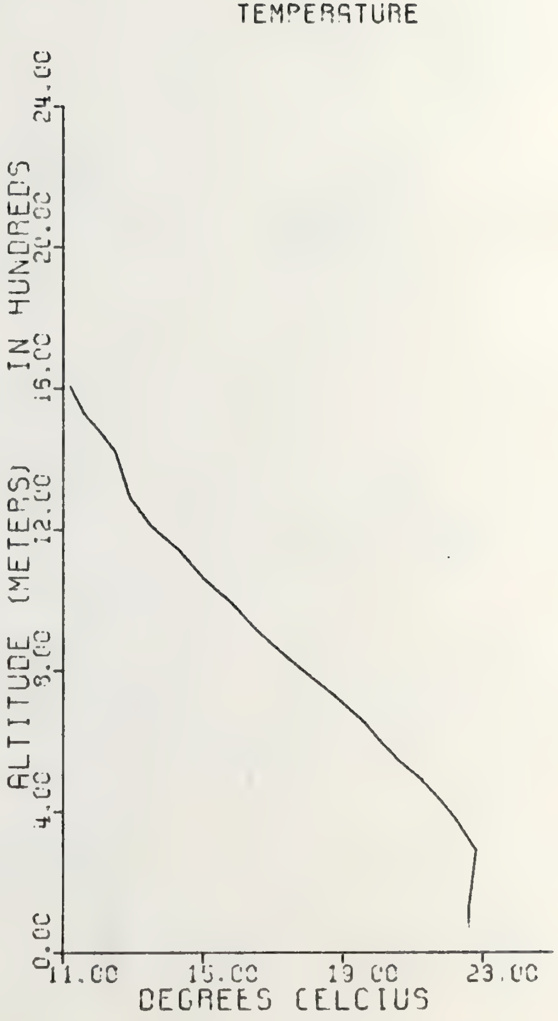
            75.      171.       0.8  22.6
           130.      147.       1.6  22.6
           207.      156.       3.0  22.7
           290.      154.       4.2  22.8
           381.      143.       4.5  22.2
           442.      138.       3.6  21.7
           494.      136.       3.0  21.2
           544.      131.       2.4  20.6
           596.      131.       2.7  20.1
           654.      139.       3.4  19.6
           724.      154.       3.5  18.8
           787.      167.       3.7  18.0
           845.      176.       4.0  17.3
           918.      180.       4.1  16.5
           992.      181.       4.1  15.8
          1062.      184.       4.4  15.0
          1142.      192.       4.5  14.3
          1211.      196.       4.5  13.5
          1292.      192.       6.6  12.9
          1418.      187.       6.4  12.5
          1471.      182.       4.2  12.1
          1528.      183.       4.8  11.6
```

C-B PIBAL SOUNDING

TIME 700 DATE 9/5/78


WIND DIRECTION


WIND SPEED

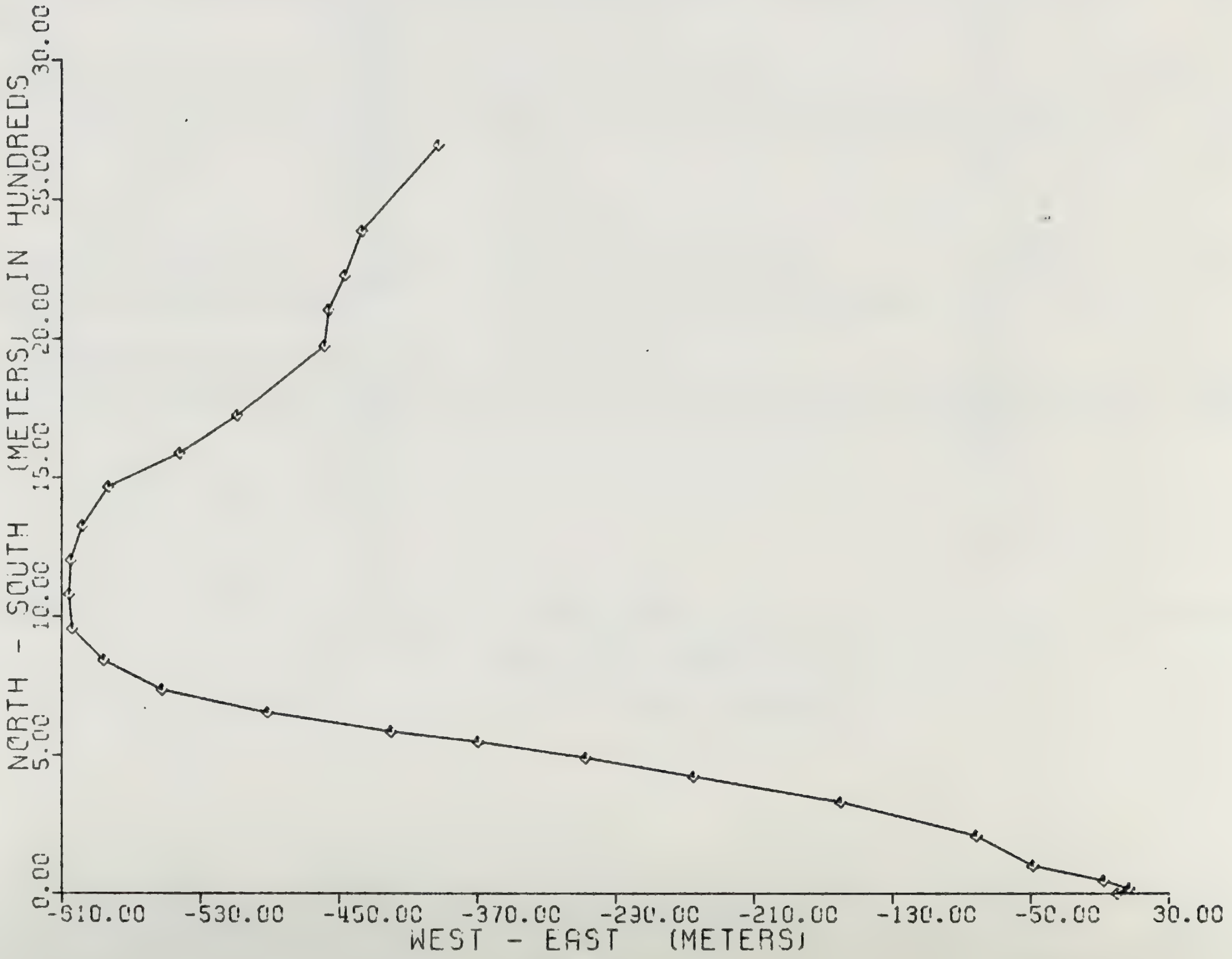

TEMPERATURE

C-B PIBAL SOUNDING

TIME 700 DATE 9/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 5-78

BALLOON RELEASED 1350 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                THEODOLITE #1                 THEODOLITE #2

   TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0             42.5       -0.1        0.0
   0.5         330.1       27.4             38.4        2.2       33.0
   1.0         348.0       30.3             35.4        5.3       30.4
   1.5           2.2       28.3             31.4        9.9       29.3
   2.0           7.1       27.3             29.0       12.2       28.1
   2.5           9.1       26.6             27.1       13.6       27.0
   3.0           9.1       26.7             25.4       15.3       25.9
   3.5           8.5       27.1             23.9       16.6       24.7
   4.0           7.8       27.9             22.0       18.2       23.6
   4.5           8.2       29.6             21.4       20.1       22.5
   5.0           7.3       32.0             20.2       22.8       20.7
   5.5           7.5       34.8             19.4       25.9       18.9
   6.0           7.7       36.6             18.9       27.7       16.0
   6.5           7.8       37.4             18.7       28.5       13.1
   7.0           7.7       38.0             17.5       29.6       10.2
   7.5           6.6       38.8             17.2       30.4        7.4
   8.0           6.2       39.2             16.7       30.9        6.4
   8.5           5.8       39.4             16.1       31.5        5.5
   9.0           5.5       39.3             15.7       31.5        4.6
   9.5           4.9       39.3             15.2       31.6        3.7
  10.0           4.2       39.2             14.6       31.7        3.0
  10.5           3.8       39.2             14.1       31.9        2.5
  11.0           3.5       39.2             13.7       32.1        2.0
  11.5           2.9       39.5             13.2       32.5        1.5
  12.0           2.5       39.8             12.8       32.9        1.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        5.0       4.7
     2       24.0       5.5
     3       76.8       7.7
     4       52.2       9.8
     5        8.2      11.7
     6       40.4      13.6
     7       52.9      15.1
     8       31.0      17.2
     9       31.2      18.8
    10       82.6      20.6
    11       93.4      23.3
    12       40.0      25.0
    13       13.3      25.7
    14       92.5      28.6
    15       11.2      28.1
```
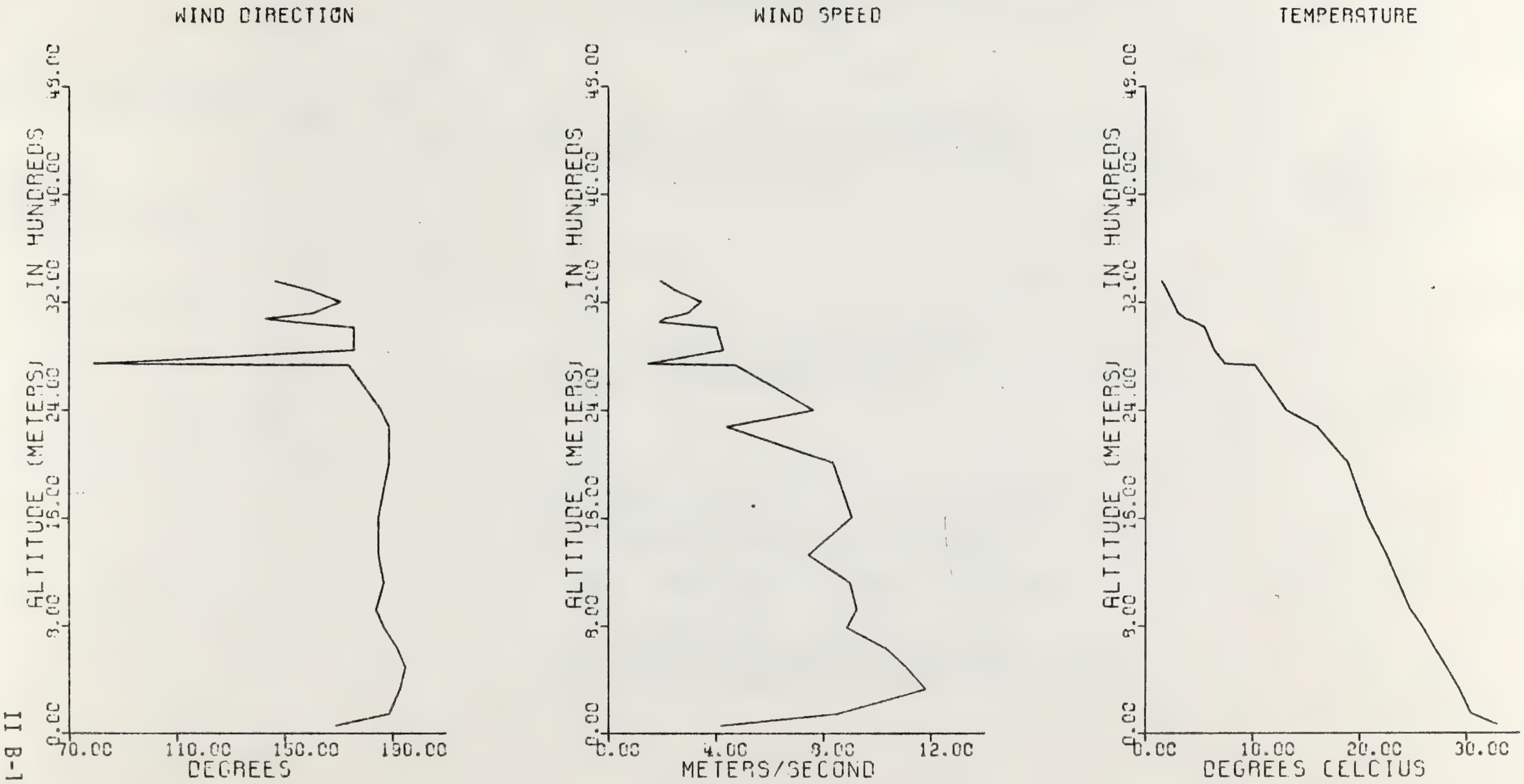

```
 16     31.8      12.8
 16      5.4      28.7
 17     20.6      30.1
 18      0.8      30.5
 19      4.2      30.7
 20     23.4      31.1
 21     25.7      31.9
 22     36.0      32.6
 23     49.2      33.0
 24     55.3      33.5


        HEIGHT   DIRECTION   SPEED   TEMP
         FEET     DEGREES   FT/SEC  DEG C

          193.      169.      13.7   33.0
          485.      189.      28.0   30.4
         1088.      193.      38.8   29.3
         1610.      195.      36.4   28.1
         2078.      192.      33.9   27.0
         2589.      187.      29.1   25.9
         3032.      184.      30.3   24.7
         3683.      187.      29.5   23.6
         4363.      185.      24.4   22.5
         5280.      185.      29.7   20.7
         6597.      189.      27.4   18.9
         7475.      189.      14.4   16.0
         7882.      186.      25.0   13.1
         8978.      174.      15.5   10.2
         9012.       79.       4.8    7.4
         9339.      176.      14.0    6.4
         9887.      176.      13.2    5.5
        10015.      154.       6.2    4.6
        10101.      143.       6.8    3.7
        10237.      161.       9.7    3.0
        10511.      171.      11.3    2.5
        10784.      160.       8.2    2.0
        11008.      147.       6.4    1.5


        HEIGHT   DIRECTION   SPEED   TEMP
        METERS    DEGREES    M/SEC  DEG C

           59.      169.       4.2   33.0
          148.      189.       8.5   30.4
          332.      193.      11.8   29.3
          491.      195.      11.1   28.1
          633.      192.      10.3   27.0
          789.      187.       8.9   25.9
          924.      184.       9.2   24.7
         1123.      187.       9.0   23.6
         1330.      185.       7.4   22.5
         1609.      185.       9.1   20.7
         2011.      189.       8.4   18.9
         2278.      189.       4.4   16.0
         2402.      186.       7.6   13.1
         2736.      174.       4.7   10.2
         2747.       79.       1.5    7.4
         2846.      176.       4.3    6.4
         3013.      176.       4.0    5.5
         3052.      154.       1.9    4.6
         3079.      143.       2.1    3.7
         3120.      161.       3.0    3.0
         3204.      171.       3.4    2.5
         3287.      160.       2.5    2.0
```

C-B PIBAL SOUNDING

TIME 1350 DATE 9/5/78

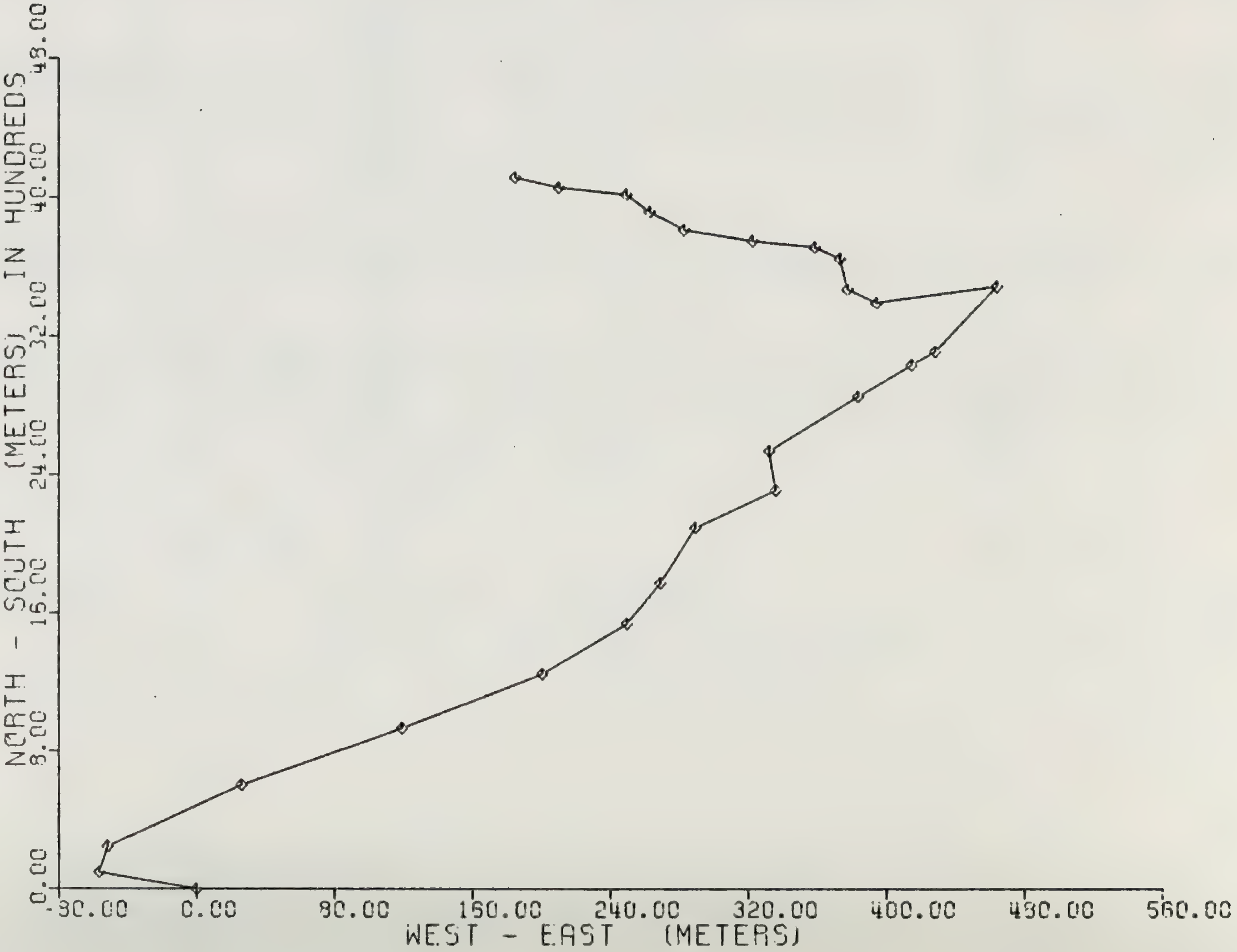


C-B PIBAL SOUNDING

TIME 1350 DATE 9/5/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 7-78

BALLOON RELEASED  710 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1              THEODOLITE #2

  TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
  0.0           0.0        0.0           42.5       -0.1         0.0
  0.5         290.1       28.7           38.0        3.6        18.3
  1.0         293.2       26.7           33.1        5.9        18.3
  1.5         301.8       30.4           29.8        8.3        18.3
  2.0         307.9       33.8           28.3       10.5        18.3
  2.5         317.7       37.1           28.5       12.3        18.4
  3.0         333.7       38.5           27.4       13.7        18.0
  3.5         340.6       37.7           26.4       14.7        17.6
  4.0         351.6       34.8           26.1       15.4        17.3
  4.5           0.2       31.4           26.2       15.7        16.9
  5.0           6.2       27.7           26.1       15.6        16.6
  5.5           9.7       25.8           26.7       15.6        16.2
  6.0          11.6       22.5           25.1       15.2        15.8
  6.5          12.2       21.0           24.4       15.1        15.5
  7.0          12.4       20.6           23.8       15.4        15.1
  7.5          12.6       20.2           23.4       15.5        14.8
  8.0          13.1       20.6           23.5       16.0        14.4
  8.5          13.5       20.0           23.5       16.6        14.0
  9.0          14.0       21.6           23.6       17.1        13.6
  9.5          14.5       22.2           23.8       17.7        13.3
 10.0          15.2       23.1           24.1       18.5        12.9
 10.5          15.8       23.8           24.2       19.0        12.5
 11.0          16.2       24.5           24.6       19.7        12.1
 11.5          16.8       25.1           24.9       20.2        11.6
 12.0          17.4       25.9           25.3       20.9        10.9



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        72.8        4.5
     2        83.9        4.9
     3        66.1        5.3
     4        89.6        5.6
     5       145.0        6.0
     6        97.5        6.8
     7        92.7        7.5
     8       118.1        8.7
     9       154.2       10.2
    10       192.4       12.1
    11       259.1       13.3
    12       270.9       16.4
    13       331.5       18.3
    14       373.9       19.8
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      16       31.8        12.8
       16      427.8        21.8
       17      650.5        22.9
       18      457.8        23.6
       19      478.0        24.3
       20      484.4        25.2
       21      429.4        26.4
       22      487.5        26.5
       23      477.2        27.2
       24      491.4        27.7


              HEIGHT   DIRECTION   SPEED   TEMP
               FEET     DEGREES   FT/SEC  DEG C

                244.      119.       13.7   18.3
                428.      130.       11.1   18.3
                651.      146.        7.4   18.3
                850.      186.        6.6   18.3
               1026.      200.       12.3   18.4
               1314.      195.       14.8   18.0
               1519.      199.       18.2   17.6
               1782.      204.       26.6   17.3
               2049.      205.       32.9   16.9
               2322.      207.       30.2   16.6
               2485.      201.       41.4   16.2
               2889.      196.       47.2   15.8
               3113.      195.       31.4   15.5
               3386.      194.       25.2   15.1
               3579.      199.       17.7   14.8
               3808.      203.       16.7   14.4
               4016.      204.       15.0   14.0
               4367.      211.       10.6   13.6
               4640.      212.       13.3   13.3
               5027.      210.       16.8   12.9
               5408.      217.        9.7   12.5
               5605.      233.        6.3   12.1
               5893.      224.        9.5   11.6


              HEIGHT   DIRECTION   SPEED   TEMP
              METERS    DEGREES    M/SEC  DEG C

                 74.      119.        4.2   18.3
                130.      130.        3.4   18.3
                199.      146.        2.3   18.3
                259.      186.        2.0   18.3
                313.      200.        3.7   18.4
                401.      195.        4.5   18.0
                463.      199.        5.5   17.6
                543.      204.        8.1   17.3
                624.      205.       10.0   16.9
                708.      207.        9.2   16.6
                758.      201.       12.6   16.2
                881.      196.       14.4   15.8
                949.      195.        9.6   15.5
               1032.      194.        7.7   15.1
               1091.      199.        5.4   14.8
               1161.      203.        5.1   14.4
               1224.      204.        4.6   14.0
               1331.      211.        3.2   13.6
               1414.      212.        4.1   13.3
               1532.      210.        5.1   12.9
               1648.      217.        3.0   12.5
               1708.      233.        1.9   12.1
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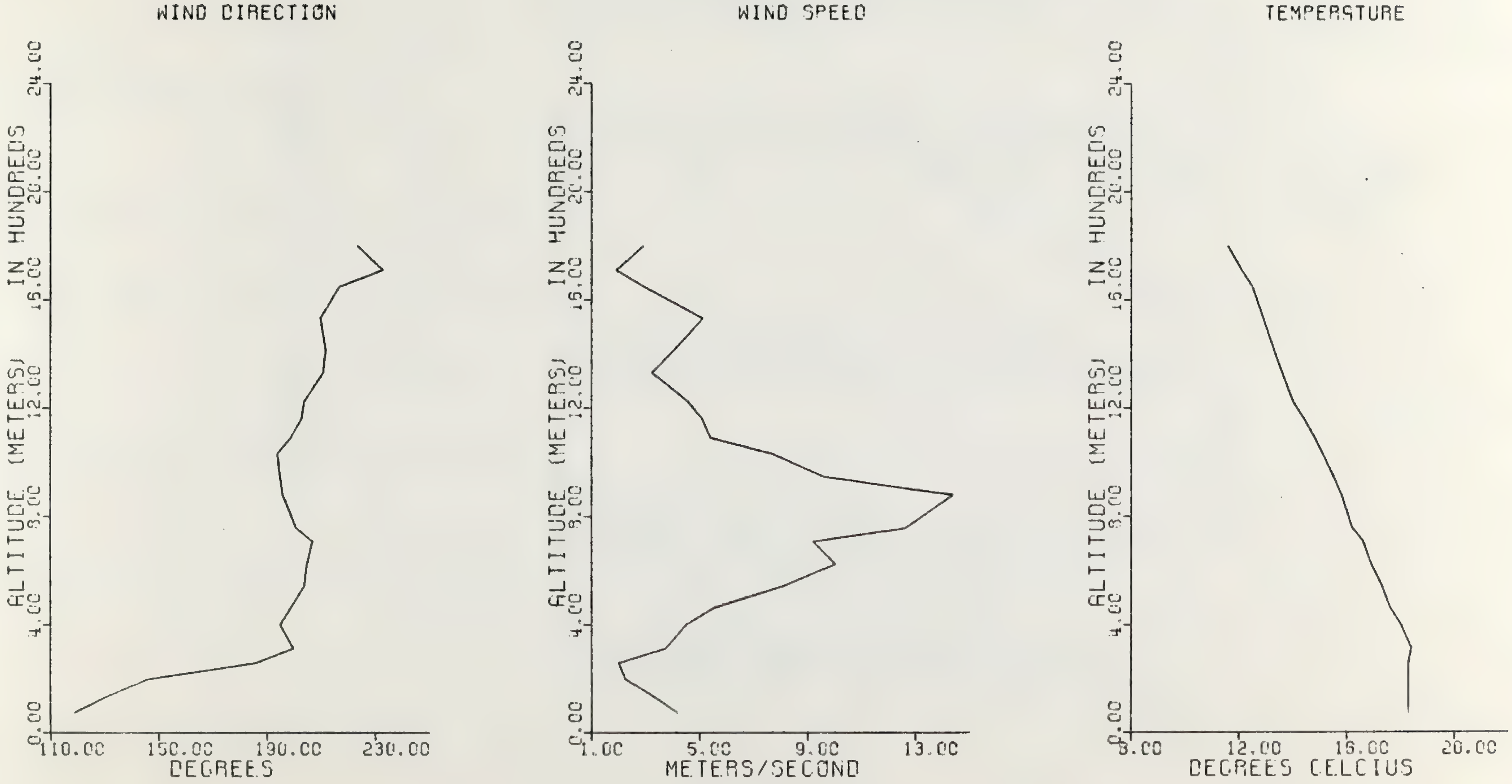
C-B PIBAL SOUNDING

TIME 710   DATE 9/7/78



WIND DIRECTION

WIND SPEED

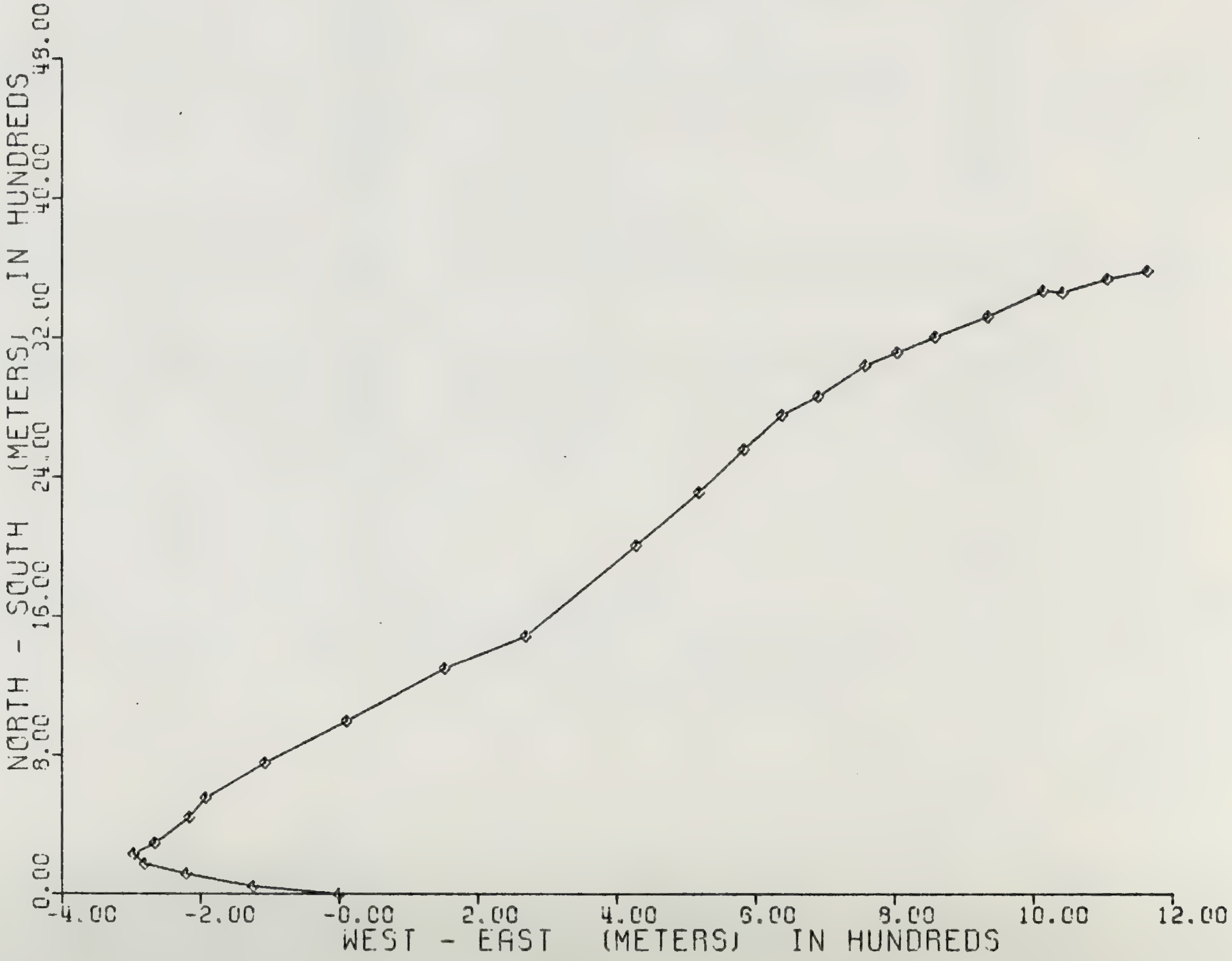
TEMPERATURE

C-B PIBAL SOUNDING

TIME 710   DATE 9/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 7-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1         0.0
   0.5           27.2       22.5            41.7        2.0        28.1
   1.0           23.3       19.7            39.6        3.1        27.0
   1.5           22.3       19.6            38.4        4.6        26.0
   2.0           20.5       18.2            37.1        4.8        25.8
   2.5           21.0       18.2            36.5        5.4        25.6
   3.0           21.1       17.6            35.5        6.0        25.4
   3.5           21.8       16.8            35.1        6.5        25.2
   4.0           21.6       17.3            34.4        7.3        25.0
   4.5           20.3       16.6            32.7        7.6        24.7
   5.0           18.0       15.5            31.0        7.7        24.4
   5.5           17.7       13.4            29.5        7.6        24.2
   6.0           17.4       13.1            28.8        7.6        23.9
   6.5           16.1       12.8            28.1        7.6        23.7
   7.0           15.7       11.8            27.3        7.5        23.4
   7.5           15.1       11.7            26.4        7.4        23.1
   8.0           15.7       11.6            26.2        7.8        22.9
   8.5           14.4       13.2            24.7        9.0        22.0
   9.0           13.1       14.6            23.4       10.2        20.6
   9.5           13.6       15.8            23.3       11.5        19.2
  10.0           13.5       17.5            23.4       12.9        17.7
  10.5           15.5       19.4            23.6       14.6        16.3
  11.0           15.8       21.1            23.5       16.0        14.8
  11.5           15.9       22.4            23.4       17.2        13.4
  12.0           16.6       23.7            23.7       18.4        12.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        40.6        4.9
     2         1.9        5.7
     3        34.0        6.5
     4        12.6        7.0
     5         9.7        7.5
     6         1.5        8.3
     7        28.3        9.1
     8        36.0        9.8
     9         0.5       10.9
    10        20.6       11.7
    11        56.1       13.6
    12        38.9       14.4
    13        66.0       14.4
    14       108.4       15.4
    15        60.1       16.2
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16      31.8      12.8
16     108.6      17.4
17      77.8      18.8
18      81.5      19.9
19     139.7      21.4
20     197.9      21.4
21     122.5      25.0
22      95.7      26.3
23     110.1      27.4
24     114.5      28.6


      HEIGHT   DIRECTION    SPEED   TEMP
       FEET     DEGREES    FT/SEC  DEG C

        169.      203.       14.5   28.1
        312.      200.       15.4   27.0
        476.      197.       12.4   26.0
        532.      197.        9.7   25.8
        627.      202.       12.5   25.6
        748.      203.       14.4   25.4
        842.      203.       13.3   25.2
        992.      196.       17.5   25.0
       1136.      188.       19.5   24.7
       1200.      191.       26.8   24.4
       1307.      195.       25.6   24.2
       1373.      179.        8.2   23.9
       1357.      180.       10.6   23.7
       1387.      189.       17.4   23.4
       1453.      195.       19.2   23.1
       1602.      191.       24.6   22.9
       1995.      180.       23.7   22.0
       2369.      189.       22.4   20.6
       2806.      200.       11.2   19.2
       3118.      205.       30.2   17.7
       4098.      204.       41.2   16.3
       4699.      200.       17.4   14.8
       5212.      206.       17.3   13.4


      HEIGHT   DIRECTION    SPEED   TEMP
      METERS    DEGREES     M/SEC   DEG C

         51.      203.        4.4   28.1
         95.      200.        4.7   27.0
        145.      197.        3.8   26.0
        162.      197.        3.0   25.8
        191.      202.        3.8   25.6
        228.      203.        4.4   25.4
        257.      203.        4.1   25.2
        302.      196.        5.3   25.0
        346.      188.        5.9   24.7
        366.      191.        8.2   24.4
        398.      195.        7.8   24.2
        418.      179.        2.5   23.9
        414.      180.        3.2   23.7
        423.      189.        5.3   23.4
        443.      195.        5.9   23.1
        488.      191.        7.5   22.9
        608.      180.        7.2   22.0
        722.      189.        6.8   20.6
        855.      200.        3.4   19.2
        951.      205.        9.2   17.7
       1249.      204.       12.6   16.3
       1432.      200.        5.3   14.8
       1589.      206.        5.3   13.4
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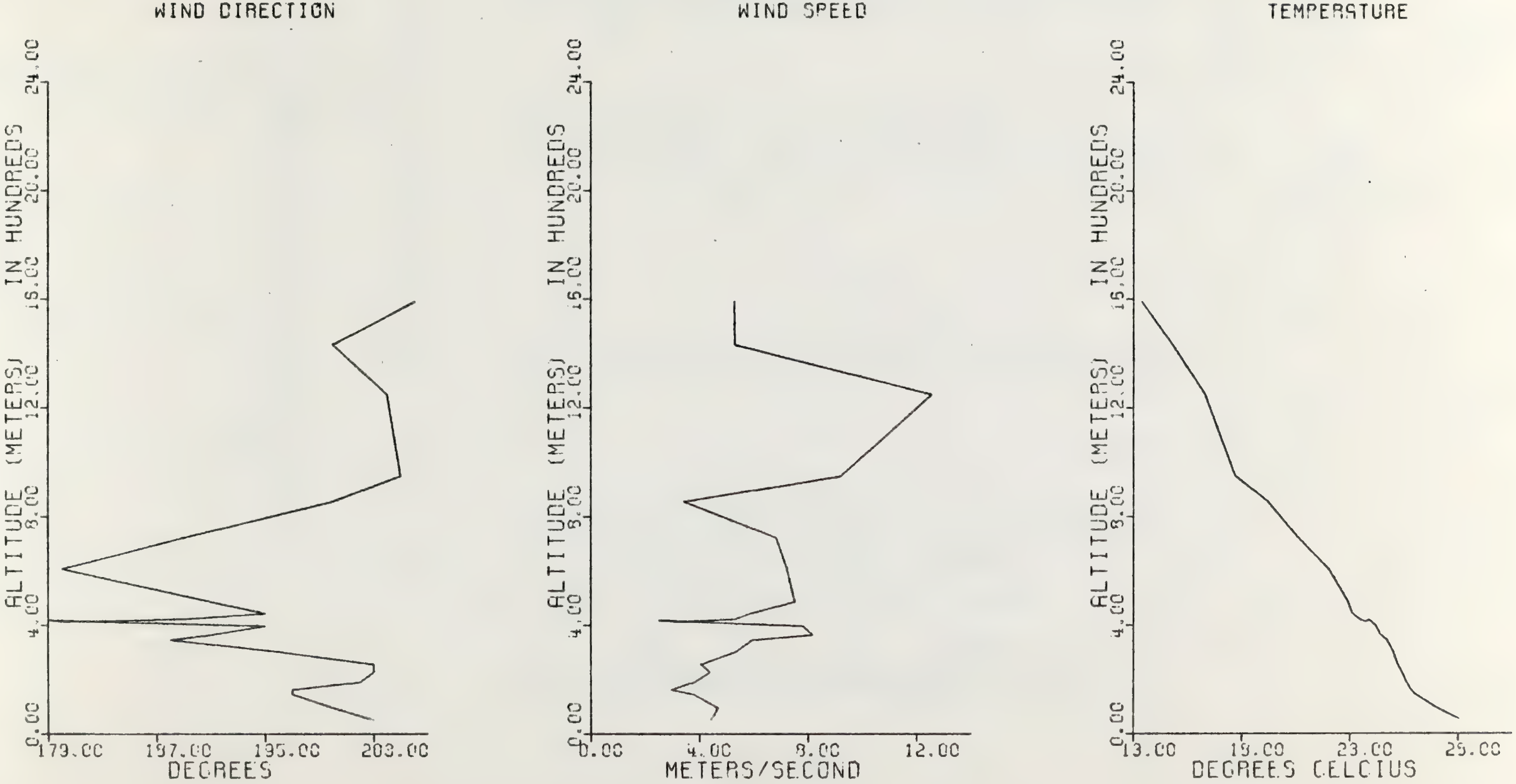
C-B PIBAL SOUNDING

TIME 1330   DATE 9/7/78


WIND DIRECTION

WIND SPEED

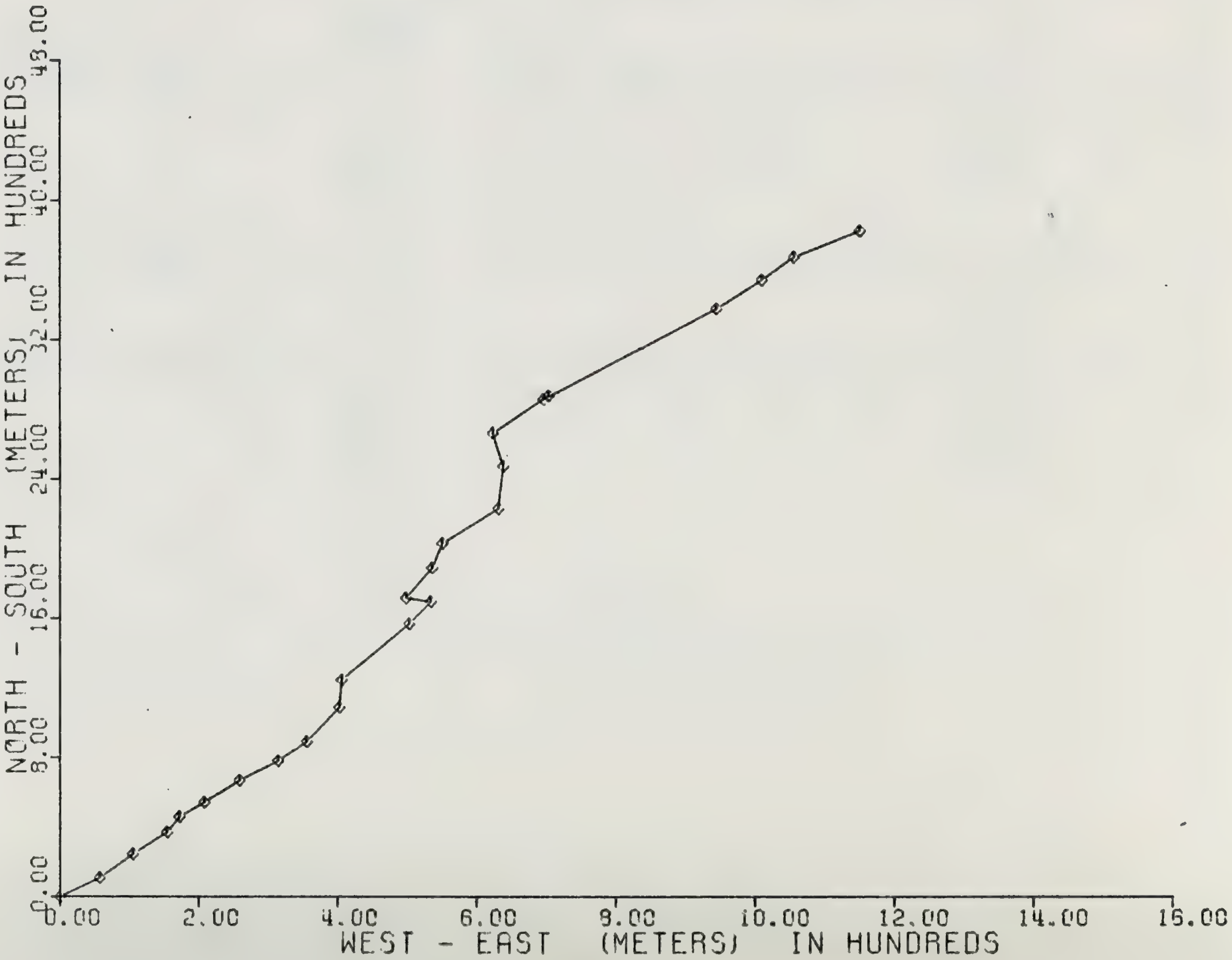
TEMPERATURE

C-B PIBAL SOUNDING

TIME 1330 DATE 9/7/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 8-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1            THEODOLITE #2

   TIME     AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0          0.0       0.0           42.5      -0.1       0.0
   0.5        350.1      55.6           41.6       4.5      12.7
   1.0         11.2      77.6           42.8       6.5      12.7
   1.5         61.3      57.6           44.6       9.5      12.7
   2.0         64.5      46.4           46.5      11.4      12.7
   2.5         67.0      41.6           48.5      12.8      12.8
   3.0         69.7      38.7           50.7      14.1      11.8
   3.5         68.6      35.8           51.6      15.4      10.8
   4.0         67.5      35.8           52.1      16.6       9.8
   4.5         66.3      34.7           52.6      17.8       8.8
   5.0         63.4      34.3           52.0      18.8       7.8
   5.5         57.8      34.6           49.6      19.9       7.5
   6.0         51.8      33.5           47.6      20.4       7.2
   6.5         48.5      32.8           46.0      20.4       7.0
   7.0         47.2      30.2           45.1      20.2       6.7
   7.5         46.0      28.8           44.7      19.7       6.5
   8.0         45.4      26.2           44.5      19.2       6.2
   8.5         44.8      24.8           44.2      18.9       6.0
   9.0         43.9      23.7           43.5      18.6       5.1
   9.5         42.9      22.7           42.8      18.2       4.2
  10.0         42.3      22.1           42.4      18.0       3.4
  10.5         41.6      21.6           41.8      17.8       2.5
  11.0         40.4      21.0           41.3      17.6       1.7
  11.5         40.2      20.4           40.8      17.4       0.8
  12.0         39.8      20.0           40.5      17.2       0.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1     121.1       4.7
     2      89.9       4.8
     3      11.1       5.7
     4      14.7       6.7
     5      12.5       7.5
     6       8.0       8.5
     7      66.5       9.7
     8      57.4      10.6
     9      90.1      11.9
    10     108.6      13.1
    11     138.2      14.4
    12      22.1      16.5
    13       6.9      17.4
    14      83.9      20.4
    15      19.7      21.7
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     16        15.6        26.6
     17         2.0        30.4
     18        26.8        34.1
     19         5.8        37.5
     20        25.4        40.4
     21        13.6        42.8
     22       252.6        45.1
     23       126.0        51.3
     24       163.2        53.6


         HEIGHT   DIRECTION   SPEED   TEMP
          FEET     DEGREES   FT/SEC  DEG C

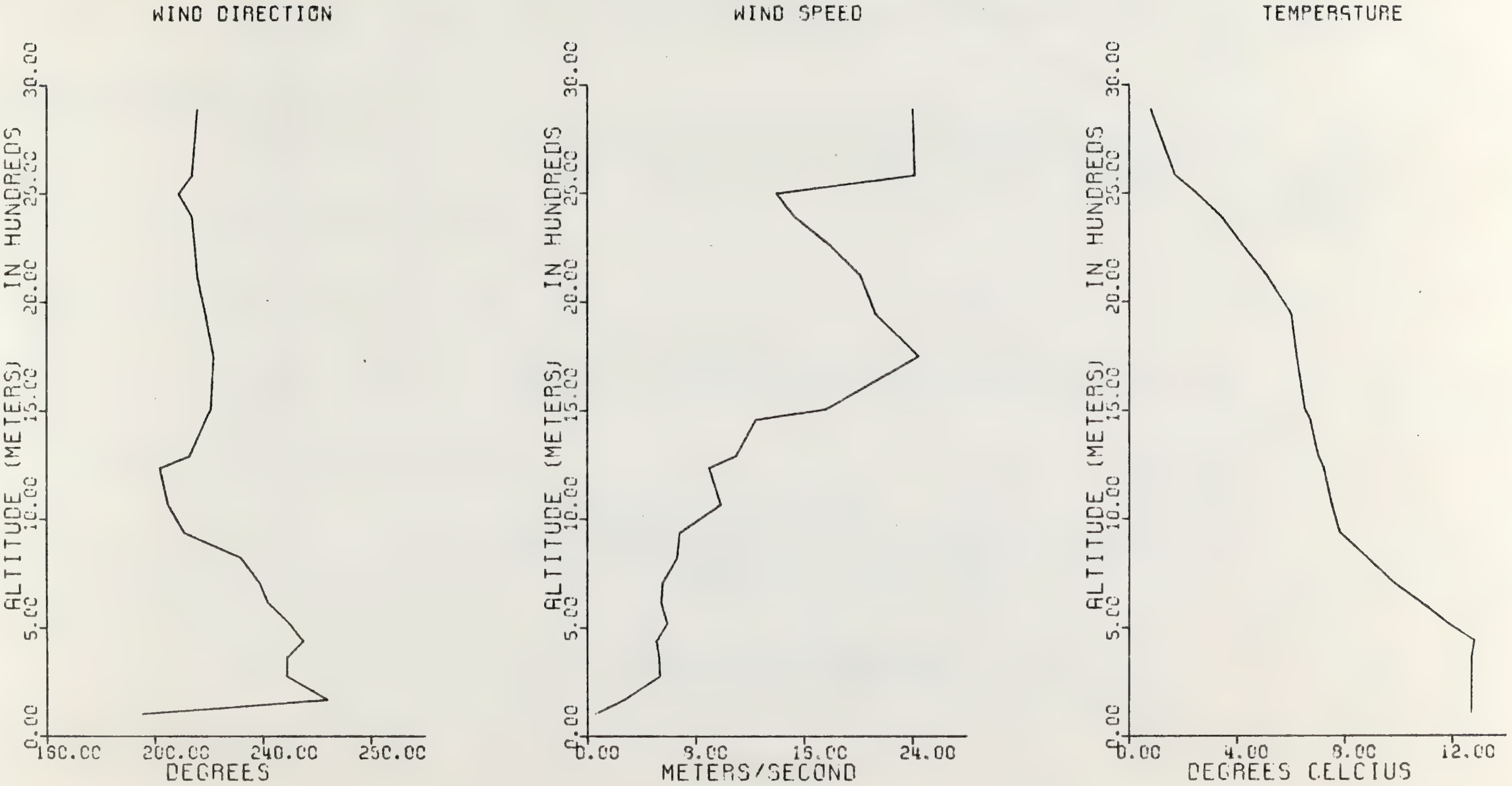
           343.      195.        2.0   12.7
           558.      264.        9.0   12.7
           905.      249.       17.6   12.7
          1187.      249.       17.4   12.7
          1438.      255.       16.8   12.8
          1704.      250.       19.4   11.8
          2022.      242.       17.9   10.8
          2317.      239.       18.2    9.8
          2700.      232.       21.8    8.8
          3077.      211.       22.4    7.8
          3500.      205.       32.4    7.5
          4054.      202.       29.5    7.2
          4233.      213.       36.0    7.0
          4779.      219.       40.8    6.7
          4943.      221.       57.9    6.5
          5740.      222.       80.3    6.2
          6376.      219.       69.8    6.0
          6954.      216.       66.1    5.1
          7417.      215.       58.7    4.2
          7849.      214.       50.0    3.4
          8196.      209.       45.7    2.5
          8477.      214.       79.3    1.7
          9468.      216.       78.8    0.8


         HEIGHT   DIRECTION   SPEED   TEMP
         METERS    DEGREES    M/SEC  DEG C

           104.      195.        0.6   12.7
           170.      264.        2.7   12.7
           276.      249.        5.4   12.7
           362.      249.        5.3   12.7
           438.      255.        5.1   12.8
           519.      250.        5.9   11.8
           616.      242.        5.5   10.8
           706.      239.        5.5    9.8
           823.      232.        6.6    8.8
           938.      211.        6.8    7.8
          1067.      205.        9.9    7.5
          1236.      202.        9.0    7.2
          1290.      213.       11.0    7.0
          1457.      219.       12.4    6.7
          1507.      221.       17.6    6.5
          1750.      222.       24.5    6.2
          1944.      219.       21.3    6.0
          2119.      216.       20.1    5.1
          2261.      215.       17.9    4.2
          2392.      214.       15.2    3.4
          2498.      209.       13.9    2.5
          2584.      214.       24.2    1.7
```

C-B PIBAL SOUNDING

TIME 715 DATE 9/8/78

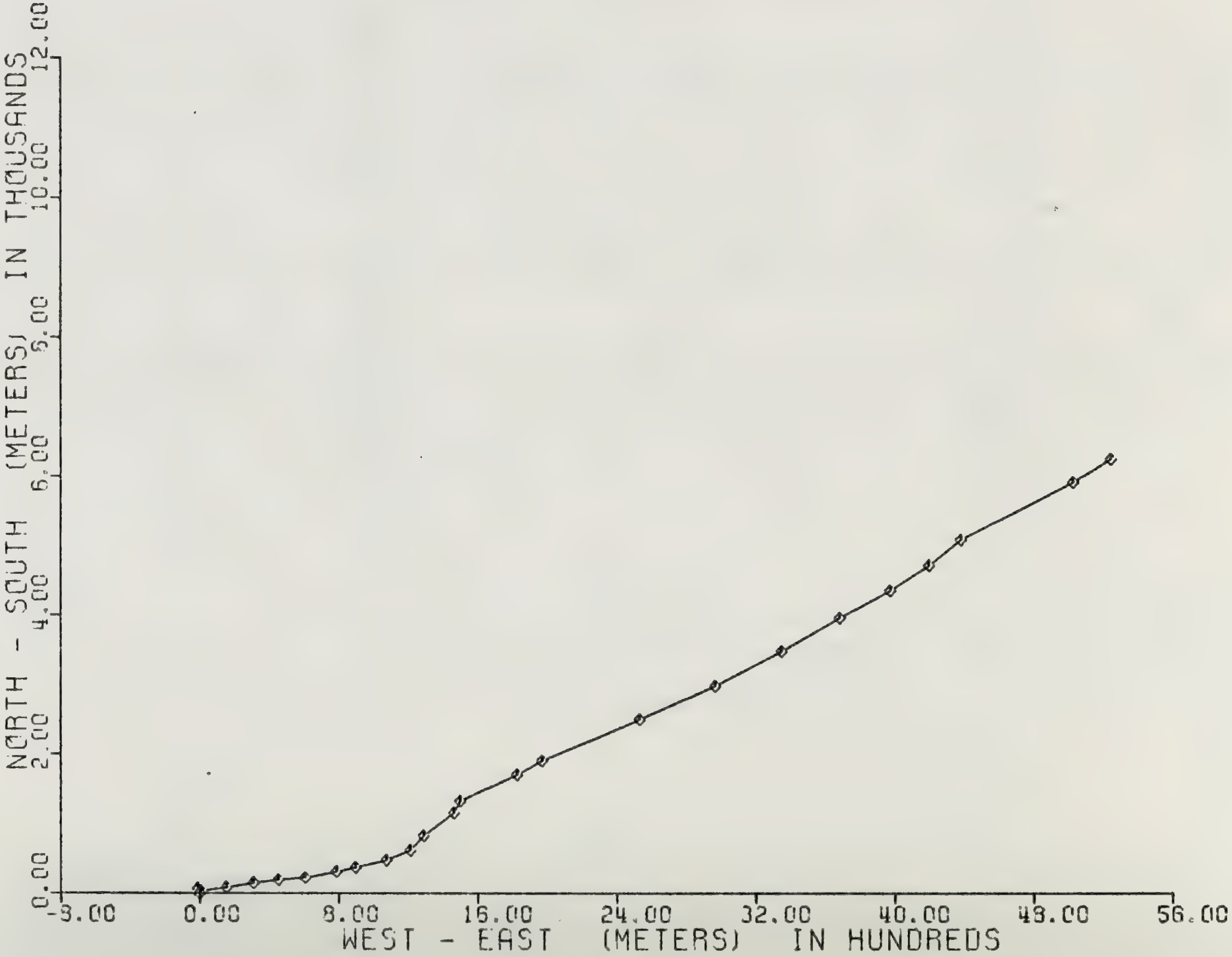


C-B PIBAL SOUNDING

TIME 715   DATE 9/8/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9- 8-78

BALLOON RELEASED 1345 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5      -0.1         0.0
   0.5          32.2       13.6           40.9       2.3        21.0
   1.0          33.6       13.6           40.1       3.7        20.3
   1.5          34.0       11.7           39.4       4.5        19.7
   2.0          34.9       10.8           39.4       4.8        19.1
   2.5          37.0       11.7           39.9       5.9        18.5
   3.0          33.4       13.4           38.0       7.3        17.9
   3.5          29.7       14.8           36.0       8.5        17.3
   4.0          28.9       16.0           34.6       9.6        16.5
   4.5          26.5       17.8           33.4      11.2        15.5
   5.0          24.4       19.2           31.5      12.6        14.6
   5.5          22.3       20.6           29.9      14.0        13.6
   6.0          20.8       21.3           28.2      15.1        12.7
   6.5          19.7       22.0           27.1      16.5        11.2
   7.0          20.0       21.9           26.7      16.7         9.8
   7.5          20.1       21.4           26.3      16.7         8.4
   8.0          20.4       21.3           26.2      16.9         7.2
   8.5          20.7       21.5           26.2      17.4         6.2
   9.0          21.1       21.6           26.2      17.6         5.2
   9.5          21.2       21.8           26.5      18.1         4.2
  10.0          21.5       22.2           26.0      18.6         3.2
  10.5          21.7       22.4           26.0      18.9         2.2
  11.0          22.0       22.6           26.0      19.1         1.2
  11.5          22.2       22.7           26.0      19.4         0.2
  12.0          22.2       22.8           26.0      19.8        -0.8


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        12.9        5.9
     2         1.4        7.4
     3        17.8        9.3
     4        33.3       10.6
     5        24.7       12.6
     6        59.7       13.6
     7       101.4       14.2
     8        16.2       16.3
     9       110.0       16.8
    10        86.0       18.5
    11       110.7       19.7
    12        97.7       22.0
    13       213.1       24.4
    14       166.4       26.6
```
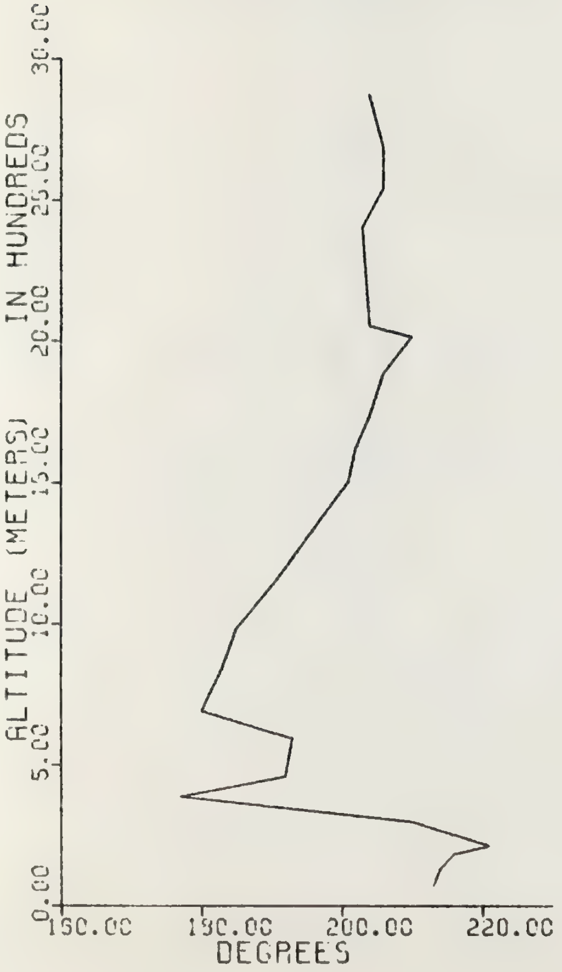

```
16      176.7      30.8
17      221.7      32.9
18      186.5      34.8
19      338.8      34.9
20      210.8      39.8
21      209.9      41.6
22      148.5      43.5
23      172.3      46.1
24      289.8      48.1


             HEIGHT   DIRECTION   SPEED   TEMP
              FEET     DEGREES   FT/SEC  DEG C

              232.      213.      29.8   21.0
              433.      214.      32.6   20.3
              606.      216.      31.1   19.7
              703.      221.      30.7   19.1
              986.      210.      27.5   18.5
             1275.      177.      18.0   17.9
             1510.      192.      25.9   17.3
             1946.      193.      23.3   16.5
             2269.      180.      21.0   15.5
             2777.      183.      27.0   14.6
             3226.      185.      31.6   13.6
             3821.      191.      41.3   12.7
             4493.      197.      40.1   11.2
             4932.      201.      41.1    9.8
             5311.      202.      38.7    8.4
             5694.      204.      35.3    7.2
             6190.      206.      34.7    6.2
             6607.      210.      17.2    5.2
             6741.      204.      43.8    4.2
             7888.      203.      58.6    3.2
             8337.      206.      31.5    2.2
             8802.      206.      38.8    1.2
             9416.      204.      40.0    0.2


             HEIGHT   DIRECTION   SPEED   TEMP
             METERS    DEGREES    M/SEC  DEG C

               71.      213.       9.1   21.0
              132.      214.       9.9   20.3
              185.      216.       9.5   19.7
              214.      221.       9.4   19.1
              301.      210.       8.4   18.5
              389.      177.       5.5   17.9
              460.      192.       7.9   17.3
              593.      193.       7.1   16.5
              692.      180.       6.4   15.5
              847.      183.       8.2   14.6
              983.      185.       9.6   13.6
             1165.      191.      12.6   12.7
             1369.      197.      12.2   11.2
             1503.      201.      12.5    9.8
             1619.      202.      11.8    8.4
             1736.      204.      10.8    7.2
             1887.      206.      10.6    6.2
             2014.      210.       5.2    5.2
             2055.      204.      13.4    4.2
             2404.      203.      17.9    3.2
             2541.      206.       9.6    2.2
             2683.      206.      11.8    1.2
             2870.      204.      12.2    0.2
```

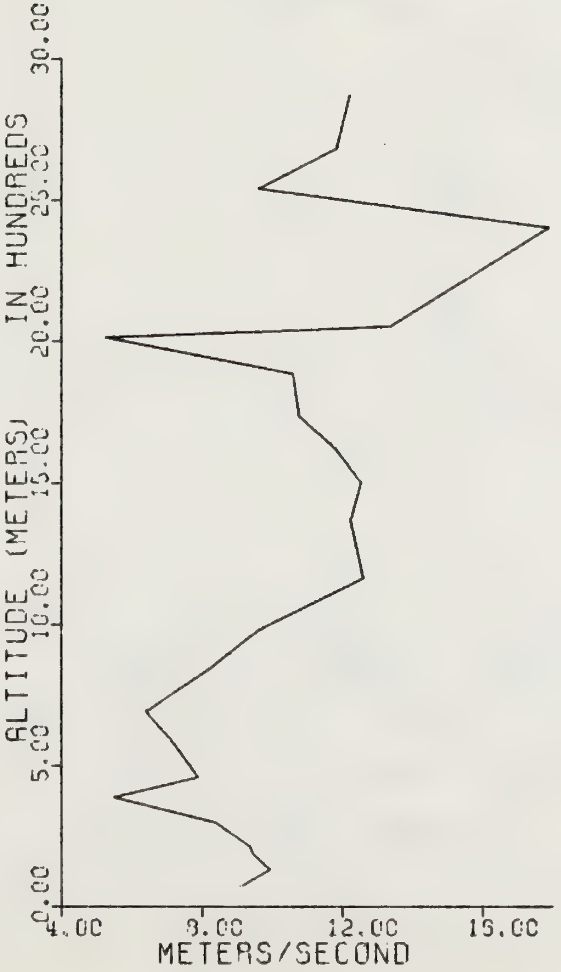
C-B PIBAL SOUNDING

TIME 1345 DATE 9/8/78

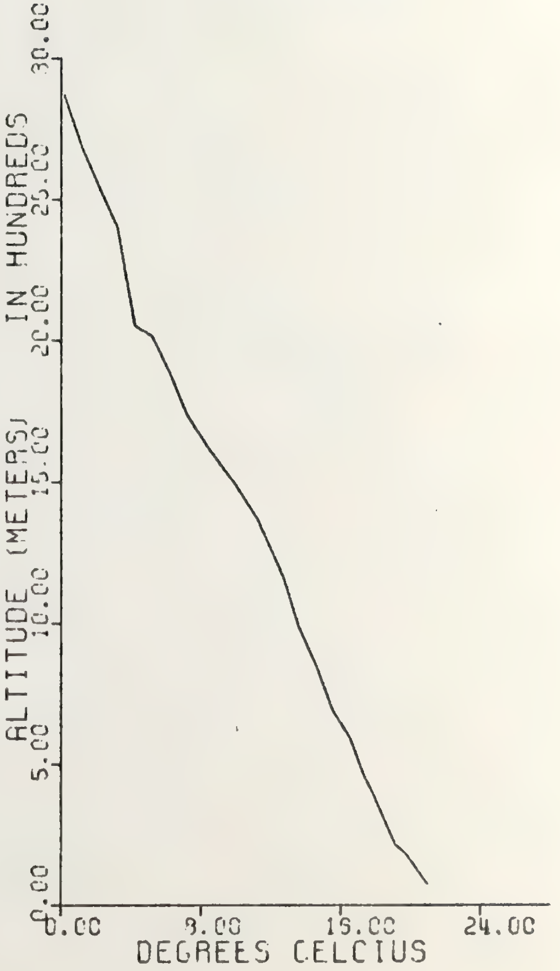
WIND DIRECTION



WIND SPEED



TEMPERSTURE

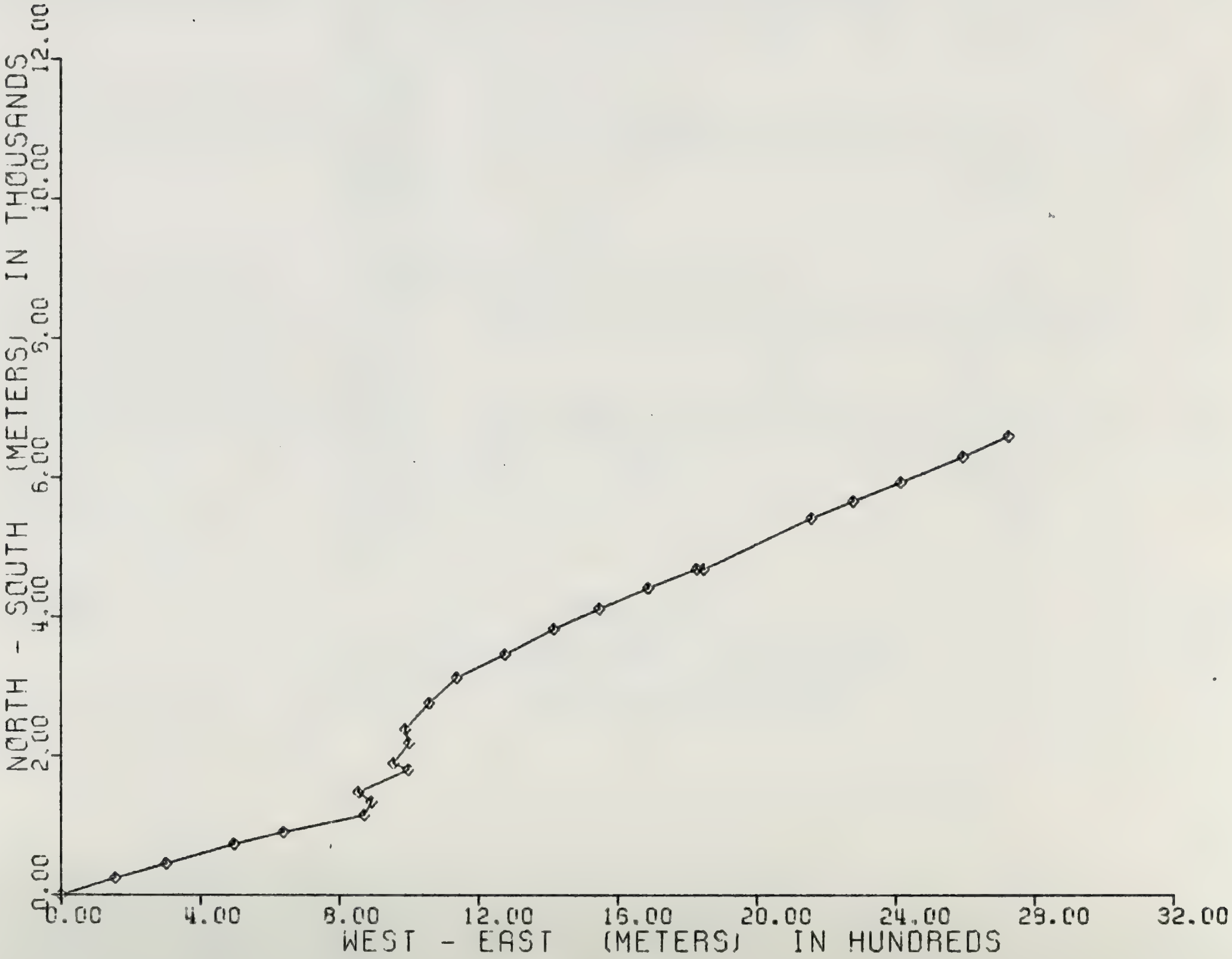


C-B PIBAL SOUNDING

TIME 1345   DATE 9/8/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 0700

DATE: 9/11/78

LAUNCH RAINED OUT.

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C-B PIBAL SOUNDING

SOUNDING DATE  9-11-78

BALLOON RELEASED 1400 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                     THEODOLITE #1                THEODOLITE #2

    TIME        AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
    0.0             0.0        0.0             42.5       -0.1        0.0
    0.5            44.8       68.5             43.7        4.7       14.2
    1.0            68.4       69.6             44.8        9.3       12.3
    1.5            52.4       64.4             44.3       15.1       10.4
    2.0            48.0       63.6             43.9       19.3        8.5
    2.5            44.0       60.8             43.0       21.9        6.7
    3.0            40.0       56.4             42.1       22.9        5.7
    3.5            37.3       53.4             41.5       23.7        4.7
    4.0            39.8       51.3             42.2       24.8        3.8
    4.5            44.6       49.8             44.2       25.4        2.8
    5.0            51.7       46.1             47.0       24.5        1.9
    5.5            54.6       42.6             49.3       23.7        1.5
    6.0            57.0       40.0             50.9       23.6        1.1
    6.5            59.0       38.2             52.3       23.2        0.7
    7.0            60.3       36.9             53.5       22.9        0.3
    7.5            61.5       34.3             54.8       22.5        0.0
    8.0            62.9       33.8             56.3       22.8       -0.5
    8.5            63.6       32.2             57.1       23.0       -1.0
    9.0            64.0       31.3             58.1       22.9       -2.8
    9.5            64.3       30.0             58.5       22.4       -4.6
   10.0            64.4       28.4             58.8       21.7       -5.0
   10.5            64.4       27.9             59.0       21.1       -5.5



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

   TIME        RHO        ERROR

      1        97.5        4.7
      2        66.7        5.3
      3        49.8        6.4
      4        44.8        7.4
      5        17.5        8.3
      6        35.4        9.3
      7        86.4       10.2
      8        93.3       11.3
      9       120.0       12.1
     10        69.3       12.9
     11       162.9       14.0
     12       148.5       15.5
     13       150.8       16.4
     14       188.4       17.2
     15       165.2       19.4
     16       221.7       20.9
     17       114.1       23.8
     18       187.3       26.0
```

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19      142.0       27.6
20       85.0       29.6
21      171.0       29.3


     HEIGHT   DIRECTION   SPEED  TEMP
      FEET     DEGREES   FT/SEC DEG C

      417.      249.        5.4  14.2
      851.      234.        9.3  12.3
     1499.      219.       12.1  10.4
     2046.      214.       11.6   8.5
     2501.      210.       14.8   6.7
     2830.      208.       15.7   5.7
     3126.      220.       15.7   4.7
     3528.      242.       16.3   3.8
     3824.      261.       19.2   2.8
     3909.      259.       23.0   1.9
     4064.      250.       26.1   1.5
     4400.      252.       23.5   1.1
     4538.      257.       17.6   0.7
     4674.      250.       23.8   0.3
     5082.      251.       33.6   0.0
     5480.      249.       39.2  -0.5
     6167.      247.       46.0  -1.0
     6651.      247.       35.1  -2.8
     6855.      245.       35.0  -4.6
     7070.      246.       18.0  -5.0


     HEIGHT   DIRECTION   SPEED  TEMP
     METERS    DEGREES    M/SEC  DEG C

      127.      249.        1.6  14.2
      259.      234.        2.8  12.3
      457.      219.        3.7  10.4
      624.      214.        3.5   8.5
      762.      210.        4.5   6.7
      863.      208.        4.8   5.7
      953.      220.        4.8   4.7
     1075.      242.        5.0   3.8
     1165.      261.        5.9   2.8
     1191.      259.        7.0   1.9
     1239.      250.        8.0   1.5
     1341.      252.        7.2   1.1
     1383.      257.        5.4   0.7
     1425.      250.        8.8   0.3
     1549.      251.       10.2   0.0
     1670.      249.       11.9  -0.5
     1880.      247.       14.0  -1.0
     2027.      247.       10.7  -2.8
     2090.      245.       10.7  -4.6
     2155.      246.        5.5  -5.0
```
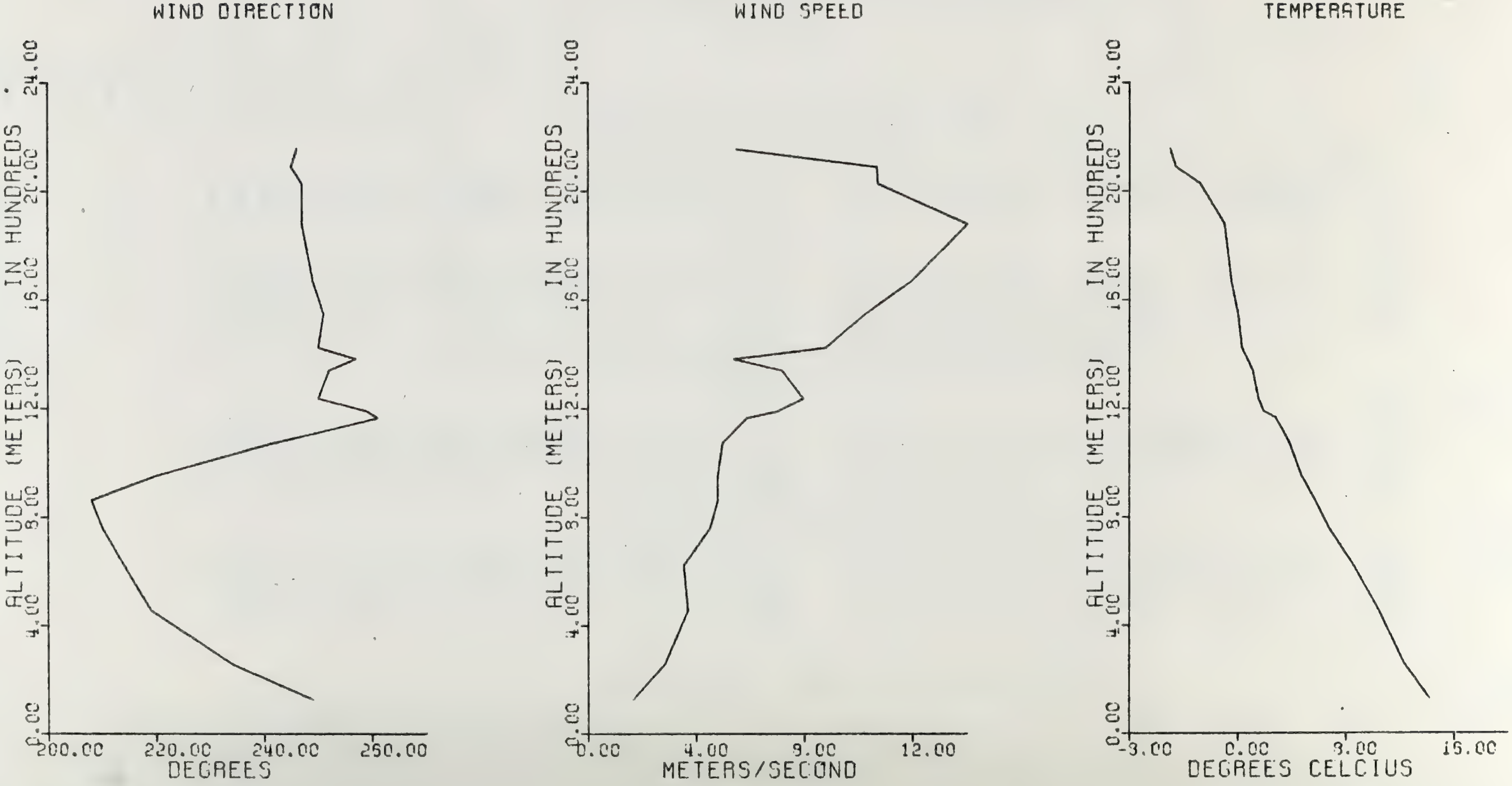

C-B PIBAL SOUNDING

TIME 1400 DATE 9/11/78



WIND DIRECTION

WIND SPEED

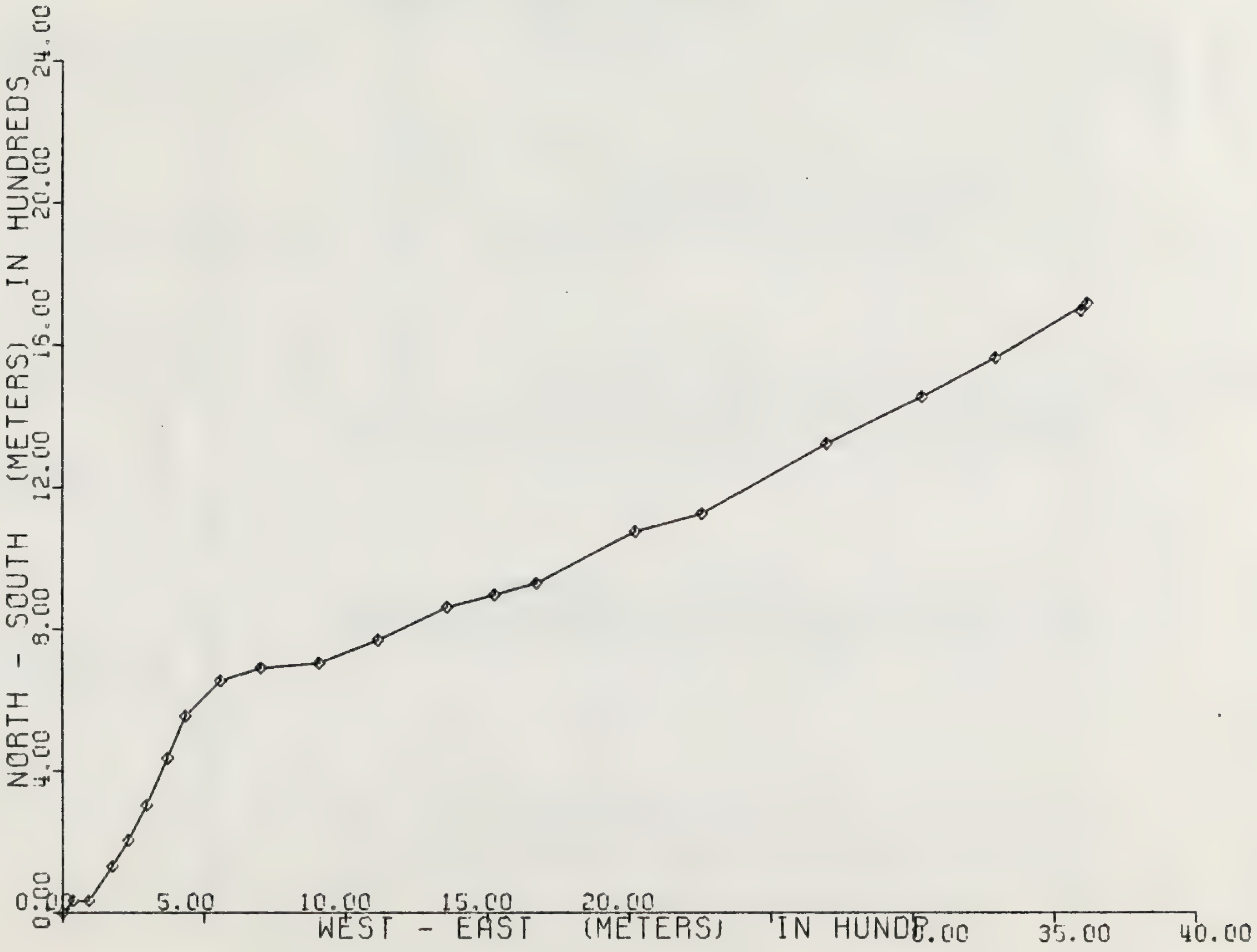
TEMPERATURE

C-B PIBAL SOUNDING

TIME 1400 DATE 9/11/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-13-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                 THEODOLITE #1               THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1        0.0
   0.5         317.5       53.7           40.3        2.6        0.0
   1.0         325.0       63.7           39.6        5.5        0.0
   1.5         332.0       62.8           38.3        8.1        1.1
   2.0         336.3       61.7           36.9       10.4        3.4
   2.5         347.7       62.5           36.5       12.8        4.2
   3.0          15.5       62.7           38.3       15.6        4.4
   3.5          35.1       57.3           41.2       16.9        4.0
   4.0          43.4       53.2           42.4       17.5        3.5
   4.5          50.5       48.4           44.6       17.9        3.1
   5.0          58.2       41.4           48.2       18.2        2.6
   5.5          61.3       36.4           49.9       18.2        2.2
   6.0          60.8       33.9           50.9       18.3        1.8
   6.5          60.4       32.3           51.2       18.6        1.4
   7.0          59.5       31.7           51.2       19.0        1.0
   7.5          57.4       31.3           50.3       19.5        0.6
   8.0          53.7       30.3           48.2       19.7        0.2
   8.5          50.5       29.3           47.0       19.3       -0.1
   9.0          47.8       27.4           45.5       18.9       -0.4
   9.5          46.8       25.9           45.0       18.4       -0.7
  10.0          45.8       23.8           44.6       17.8       -1.0
  10.5          45.0       22.3           44.2       17.1       -1.3
  11.0          44.3       20.6           43.7       16.4       -1.7
  11.5          43.8       19.9           43.3       16.0       -2.0
  12.0          43.3       18.8           43.0       15.4       -2.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       15.3        4.5
     2       14.6        4.7
     3       15.6        5.1
     4       28.3        5.4
     5       34.5        5.8
     6       40.3        6.6
     7       15.1        7.3
     8       34.4        7.9
     9       22.8        8.7
    10       13.9       10.2
    11      117.2       11.6
    12       73.4       13.1
    13      112.8       14.4
    14      113.8       15.5
    15      145.8       16.7
   16       224.5        18.2
   17       104.4        19.4
   18       120.9        21.9
   19       117.0        23.9
   20        92.7        28.3
   21        59.2        31.1
   22        81.1        36.2
   23        92.9        37.9
   24        65.1        41.6


           HEIGHT  DIRECTION   SPEED  TEMP
            FEET    DEGREES   FT/SEC DEG C

             236.     145.        4.0   0.0
             482.     165.        3.4   0.0
             717.     166.        4.7   1.1
             942.     187.        4.8   3.4
            1199.     232.        8.7   4.2
            1561.     247.       14.7   4.4
            1819.     249.       14.4   4.0
            1992.     250.       14.3   3.5
            2177.     253.       24.0   3.1
            2491.     252.       29.7   2.6
            2716.     244.       27.3   2.2
            3009.     238.       25.0   1.8
            3282.     234.       21.1   1.4
            3555.     223.       20.0   1.0
            3870.     209.       25.7   0.6
            4193.     204.       28.4   0.2
            4394.     209.       37.2  -0.1
            4777.     215.       42.8  -0.4
            5017.     220.       59.7  -0.7
            5634.     220.       68.5  -1.0
            5911.     220.       75.8  -1.3
            6503.     219.       64.5  -1.7
            6613.     217.       52.1  -2.0


           HEIGHT  DIRECTION   SPEED  TEMP
           METERS   DEGREES    M/SEC  DEG C

              72.     145.        1.2   0.0
             147.     165.        1.0   0.0
             219.     166.        1.4   1.1
             287.     187.        1.5   3.4
             365.     232.        2.7   4.2
             476.     247.        4.5   4.4
             554.     249.        4.4   4.0
             607.     250.        4.4   3.5
             664.     253.        7.3   3.1
             759.     252.        9.1   2.6
             828.     244.        8.3   2.2
             917.     238.        7.6   1.8
            1000.     234.        6.4   1.4
            1084.     223.        6.1   1.0
            1180.     209.        7.8   0.6
            1278.     204.        8.7   0.2
            1339.     209.       11.3  -0.1
            1456.     215.       13.0  -0.4
            1529.     220.       18.2  -0.7
            1717.     220.       20.9  -1.0
            1802.     220.       23.1  -1.3
            1982.     219.       19.7  -1.7
            2016.     217.       15.9  -2.0
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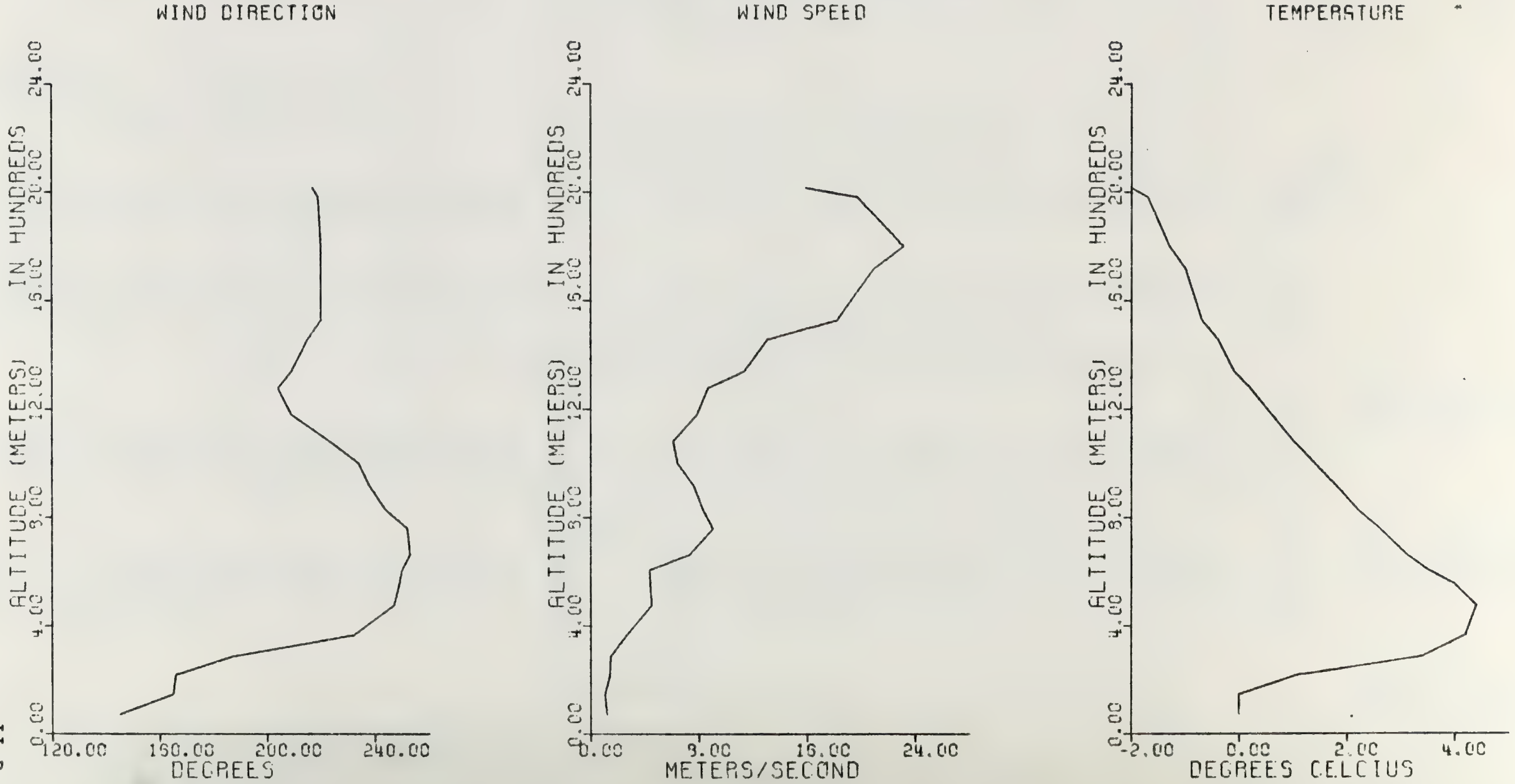
C-B PIBAL SOUNDING

TIME 715 DATE 9/13/78

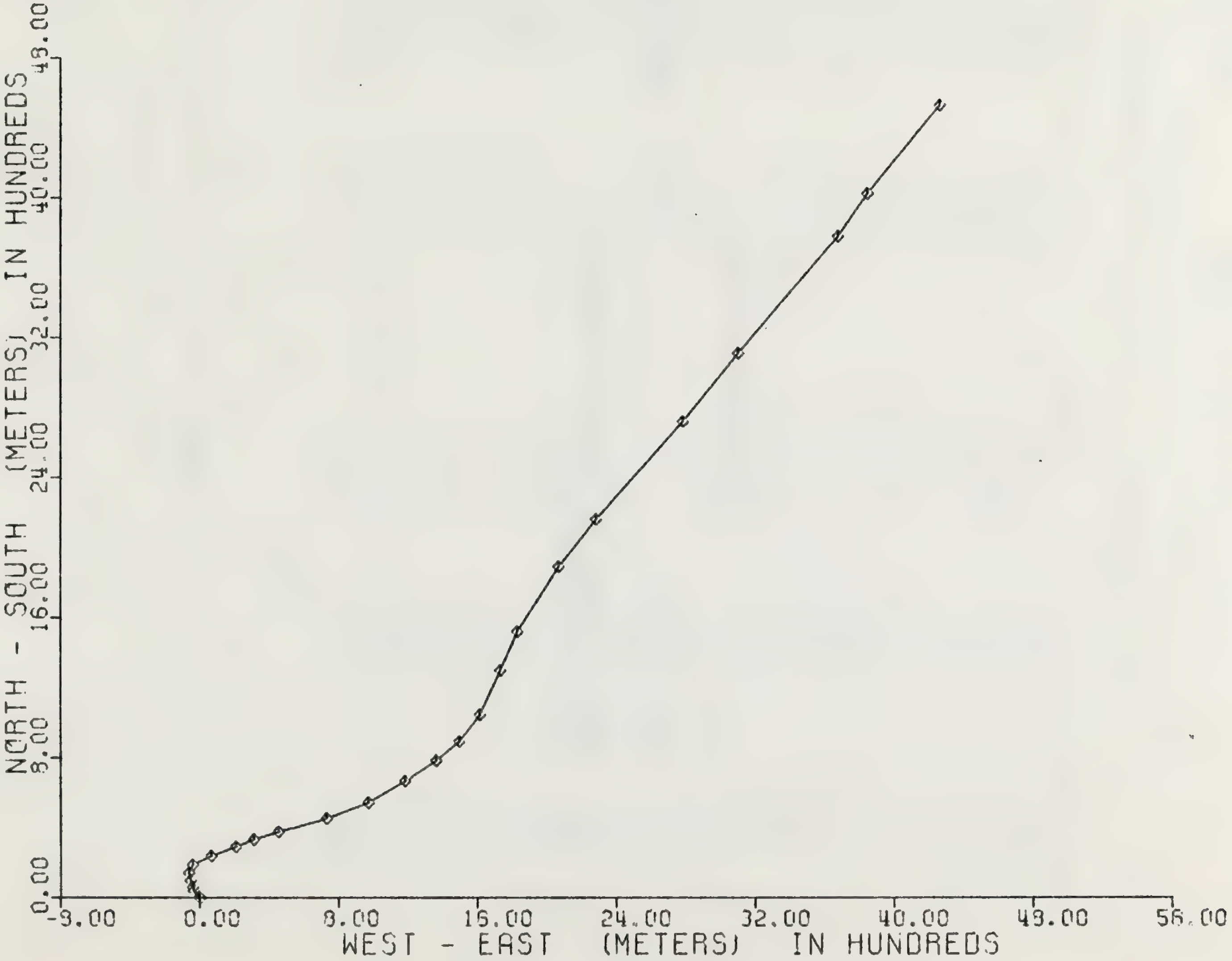


C-B PIBAL SOUNDING

TIME 715 DATE 9/13/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 1345 DATE: 9/13/78

DOUBLE THEOAOLITE DATA NOT REDUCED.
SITE #1 LOST BALLOON.

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C-B PIBAL SOUNDING

SOUNDING DATE  9-14-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1              THEODOLITE #2

  TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0           0.0        0.0           42.5       -0.1         0.0
  0.5         262.2       83.8           42.0        3.3         6.8
  1.0         294.5       67.5           38.9        7.5         8.5
  1.5         291.2       61.3           37.3        9.2        10.2
  2.0         296.0       56.5           33.6       12.8        10.8
  2.5         307.7       57.5           30.6       15.0        11.4
  3.0         312.8       48.3           25.9       16.9        12.0
  3.5         320.5       44.6           21.6       18.8        12.1
  4.0         326.2       41.8           18.6       19.9        11.7
  4.5         329.4       40.0           16.5       20.5        11.2
  5.0         332.5       38.3           14.2       21.3        10.6
  5.5         334.8       37.0           11.9       22.2         9.8
  6.0         336.4       36.3           10.5       22.7         9.0
  6.5         338.2       35.7            9.5       23.2         8.2
  7.0         339.2       35.2            8.3       23.7         7.4
  7.5         340.3       34.9            7.6       24.1         6.6
  8.0         341.4       34.9            7.2       24.5         5.8
  8.5         343.7       34.5            7.3       24.8         5.0
  9.0         345.6       33.9            7.3       24.7         4.2
  9.5         347.3       32.8            7.1       24.5         3.4
 10.0         348.6       31.7            6.8       24.1         2.7
 10.5         350.1       30.6            7.2       23.6         2.2
 11.0         352.7       29.8            7.9       23.3         1.7
 11.5         354.4       29.5            8.9       23.0         1.2
 12.0         357.3       28.7           10.1       22.8         0.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO        ERROR

     1      22.0        4.4
     2      45.2        4.8
     3      29.7        4.9
     4      37.1        5.3
     5     143.0        5.8
     6      50.9        6.4
     7      51.3        7.4
     8      41.1        8.3
     9      43.7        9.1
    10      38.2       10.1
    11      30.9       11.3
    12      39.2       12.3
    13      31.0       13.3
    14      27.3       14.3
    15      22.0       15.2
```

```
          16        29.4        16.0
          17         2.5        17.2
          18        14.4        18.3
          19        16.3        19.7
          20        19.0        21.1
          21        64.4        22.1
          22        61.5        24.0
          23        50.1        24.4
          24        91.8        26.5

              HEIGHT   DIRECTION   SPEED   TEMP
               FEET     DEGREES    FT/SEC  DEG C

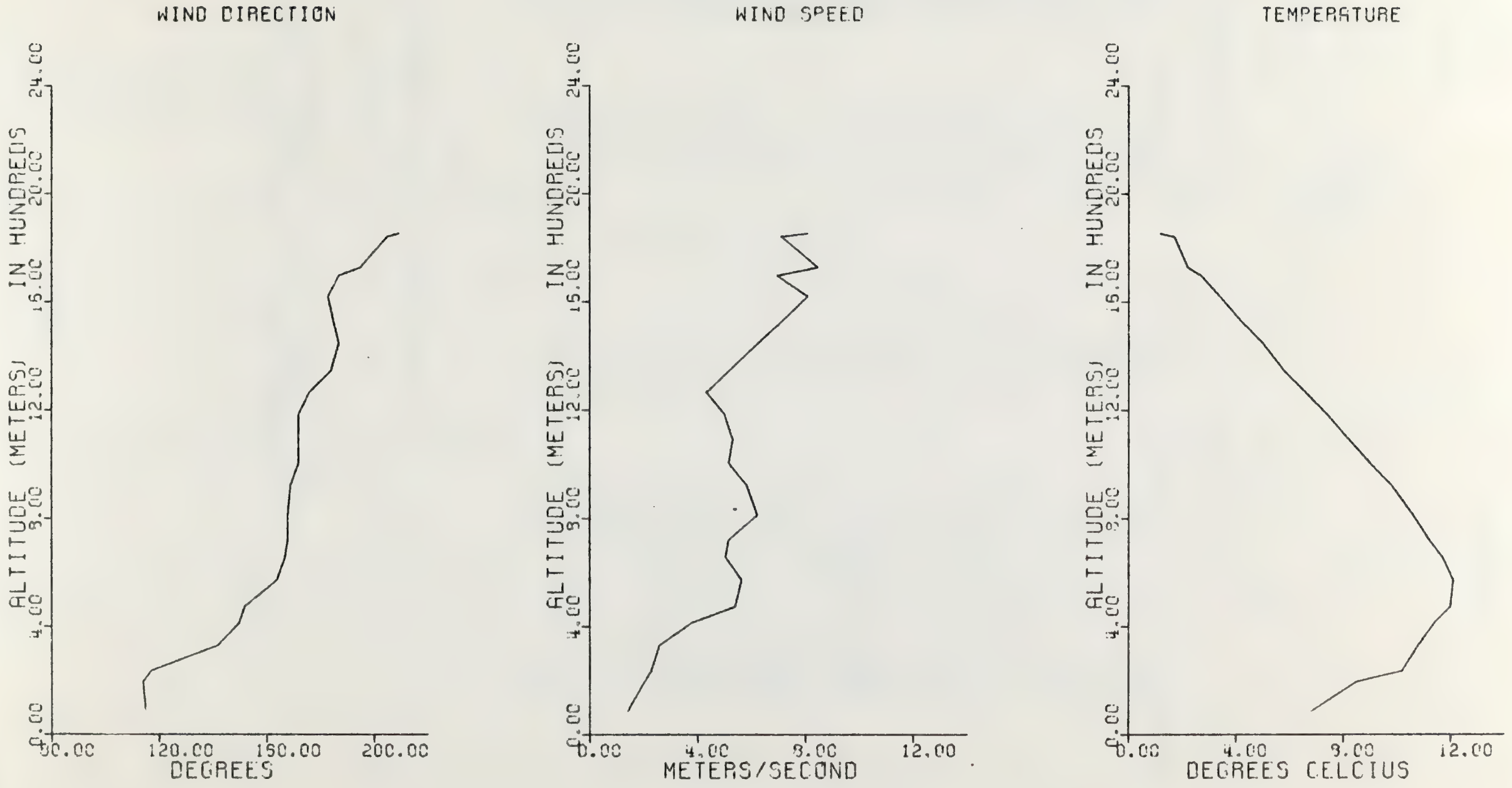
                285.      115.       4.6    6.8
                645.      114.       6.7    8.5
                776.      117.       7.5   10.2
               1081.      142.       8.5   10.8
               1360.      150.      12.4   11.4
               1557.      152.      17.7   12.0
               1880.      164.      18.5   12.1
               2157.      167.      16.5   11.7
               2371.      168.      16.9   11.2
               2667.      168.      20.4   10.6
               3025.      169.      19.1    9.8
               3296.      172.      16.9    9.0
               3587.      172.      17.4    8.2
               3887.      172.      16.4    7.4
               4156.      176.      14.2    6.6
               4416.      184.      16.9    5.8
               4751.      187.      20.5    5.0
               5015.      185.      23.4    4.2
               5316.      183.      26.5    3.4
               5568.      187.      22.8    2.7
               5668.      195.      27.7    2.2
               6045.      205.      23.3    1.7
               6081.      209.      26.4    1.2

              HEIGHT   DIRECTION   SPEED   TEMP
              METERS    DEGREES    M/SEC   DEG C

                 87.      115.       1.4    6.8
                197.      114.       2.0    8.5
                236.      117.       2.3   10.2
                330.      142.       2.6   10.8
                415.      150.       3.8   11.4
                475.      152.       5.4   12.0
                573.      164.       5.6   12.1
                658.      167.       5.0   11.7
                723.      168.       5.2   11.2
                813.      168.       6.2   10.6
                922.      169.       5.8    9.8
               1005.      172.       5.2    9.0
               1093.      172.       5.3    8.2
               1185.      172.       5.0    7.4
               1267.      176.       4.3    6.6
               1346.      184.       5.2    5.8
               1448.      187.       6.2    5.0
               1528.      185.       7.1    4.2
               1620.      183.       8.1    3.4
               1697.      187.       6.9    2.7
               1728.      195.       8.4    2.2
               1843.      205.       7.1    1.7
               1854.      209.       8.0    1.2
```

C-B PIBAL SOUNDING

TIME 715   DATE 9/14/78

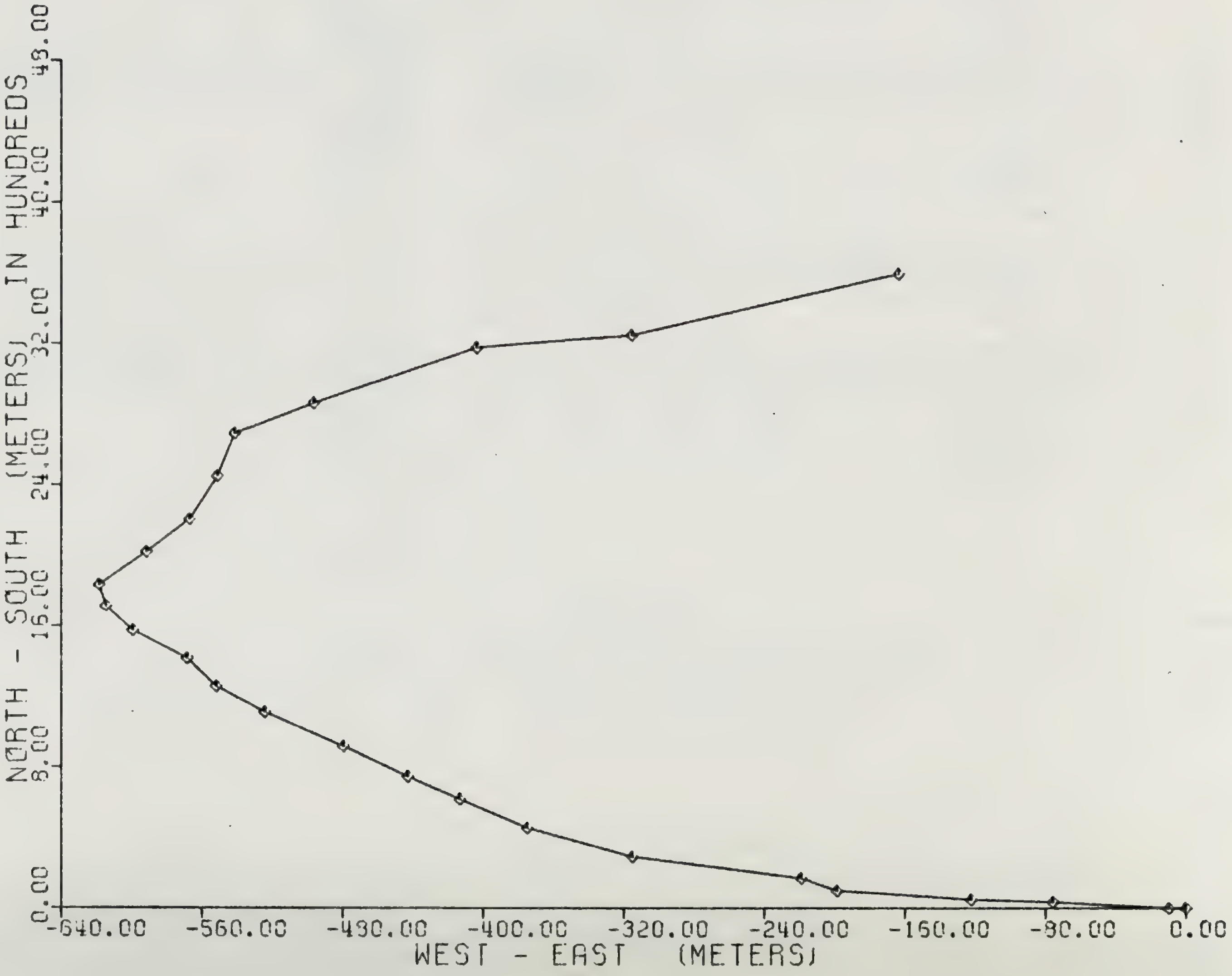


C-B PIBAL SOUNDING

TIME 715   DATE 9/14/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-14-78

BALLOON RELEASED 1315 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1             THEODOLITE #2

  TIME       AZIMUTH  ELEVATION      AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0            0.0        0.0         42.5       -0.1        0.0
  0.5           12.2       17.3         38.3        2.3       16.5
  1.0            0.9       18.5         32.1        5.3       15.6
  1.5          358.2       22.3         27.0        9.2       14.7
  2.0          358.3       24.5         23.1       12.3       13.8
  2.5          357.4       27.0         21.2       15.3       13.0
  3.0          359.9       30.4         20.0       18.8       11.3
  3.5          359.5       31.8         18.2       20.7        9.7
  4.0            0.0       31.9         17.0       21.9        8.1
  4.5          359.7       32.1         15.7       23.0        6.5
  5.0            0.7       31.7         15.4       23.4        4.8
  5.5            1.4       31.5         15.0       23.7        3.2
  6.0            1.5       31.5         14.4       24.1        1.6
  6.5            1.1       30.8         13.5       24.0        0.0
  7.0            1.0       29.7         12.9       23.5       -0.3
  7.5            0.7       27.9         12.0       22.5       -0.6
  8.0            0.8       26.5         11.5       21.7       -1.0
  8.5            1.0       25.4         11.2       21.0       -1.3
  9.0            1.3       23.7         10.7       20.1       -1.6
  9.5            1.2       23.4         10.3       19.9       -2.0
 10.0            1.3       22.5         10.0       19.5       -2.3
 10.5            1.2       22.1          9.4       19.2       -2.6
 11.0            0.6       21.5          8.6       19.0       -3.0
 11.5            0.1       21.2          7.8       18.8       -3.4
 12.0          359.6       20.8          7.0       18.6       -3.8



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME      RHO      ERROR

    1      16.8      5.5
    2      17.0      7.0
    3      37.3      8.7
    4      12.8     10.8
    5      91.4     12.1
    6      69.1     14.3
    7      34.4     16.0
    8      49.9     17.9
    9      78.1     19.6
   10     105.9     21.3
   11      90.9     22.9
   12      82.9     24.3
   13      97.6     25.6
   14     120.7     26.8
   15     150.5     28.4
```
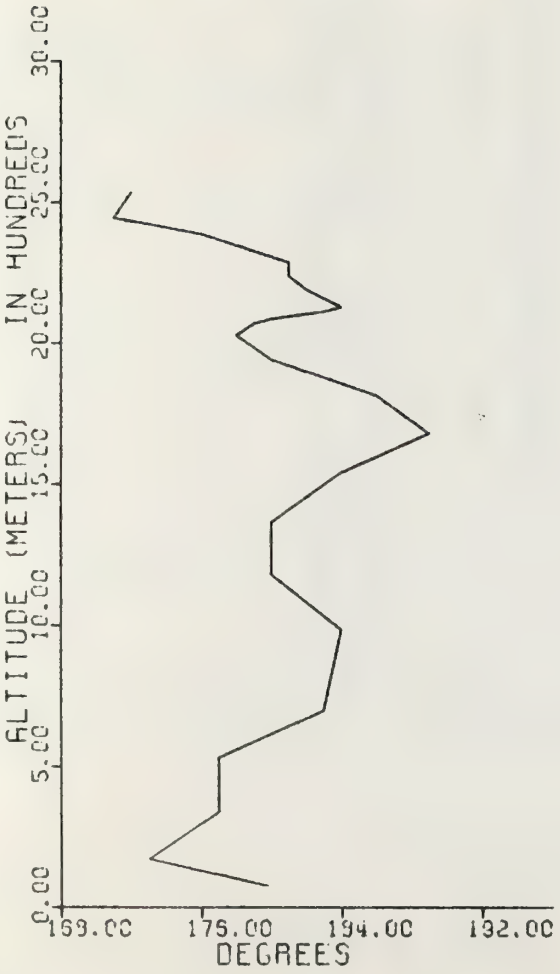
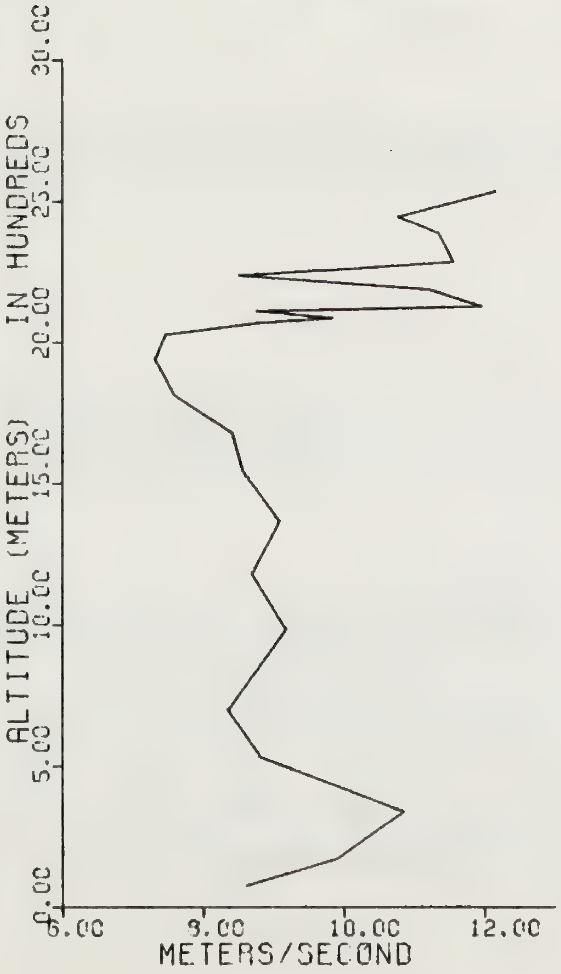

** SUSPECT DATA **

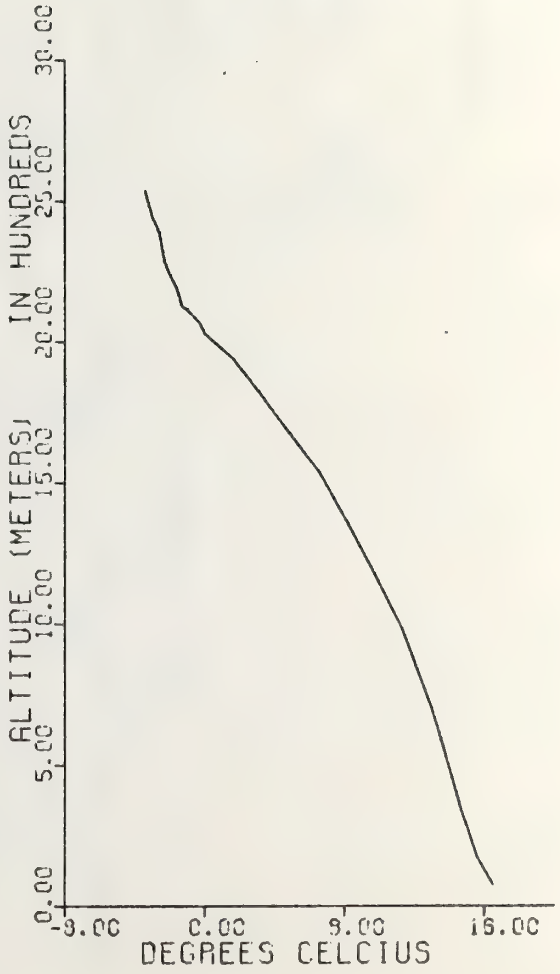
```
       16       174.6        30.0
       17       179.6        31.2
       18       252.1        33.9
       19       223.8        35.0
       20       304.4        36.8
       21       245.3        39.0
       22       322.0        40.7
       23       286.6        42.6
       24       291.7        44.9


              HEIGHT   DIRECTION   SPEED   TEMP
               FEET     DEGREES    FT/SEC  DEG C

                241.     180.       28.1   16.5
                568.     173.       32.5   15.6
               1118.     177.       35.6   14.7
               1745.     177.       28.9   13.8
               2291.     183.       27.4   13.0
               3229.     184.       30.1   11.3
               3874.     180.       28.5    9.7
               4482.     180.       29.8    8.1
               5059.     184.       28.1    6.5
               5511.     189.       27.6    4.8
               5949.     186.       24.9    3.2
               6371.     180.       24.0    1.6
               6651.     178.       24.5    0.0
               6786.     179.       28.7   -0.3
               6847.     180.       32.3   -0.6
               6931.     183.       28.7   -1.0
               6979.     184.       39.2   -1.3
               7179.     182.       36.7   -1.6
               7342.     181.       27.9   -2.0
               7500.     181.       37.9   -2.3
               7831.     176.       37.2   -2.6
               8025.     171.       35.3   -3.0
               8315.     172.       39.8   -3.4


              HEIGHT   DIRECTION   SPEED   TEMP
              METERS    DEGREES    M/SEC   DEG C

                 73.     180.        8.6   16.5
                173.     173.        9.9   15.6
                341.     177.       10.9   14.7
                532.     177.        8.8   13.8
                698.     183.        8.4   13.0
                984.     184.        9.2   11.3
               1181.     180.        8.7    9.7
               1366.     180.        9.1    8.1
               1542.     184.        8.6    6.5
               1680.     189.        8.4    4.8
               1813.     186.        7.6    3.2
               1942.     180.        7.3    1.6
               2027.     178.        7.5    0.0
               2068.     179.        8.7   -0.3
               2087.     180.        9.8   -0.6
               2113.     183.        8.7   -1.0
               2127.     184.       11.9   -1.3
               2188.     182.       11.2   -1.6
               2238.     181.        8.5   -2.0
               2286.     181.       11.6   -2.3
               2387.     176.       11.3   -2.6
               2446.     171.       10.8   -3.0
```

C-B PIBAL SOUNDING

TIME 1315   DATE 9/14/78


WIND DIRECTION


WIND SPEED

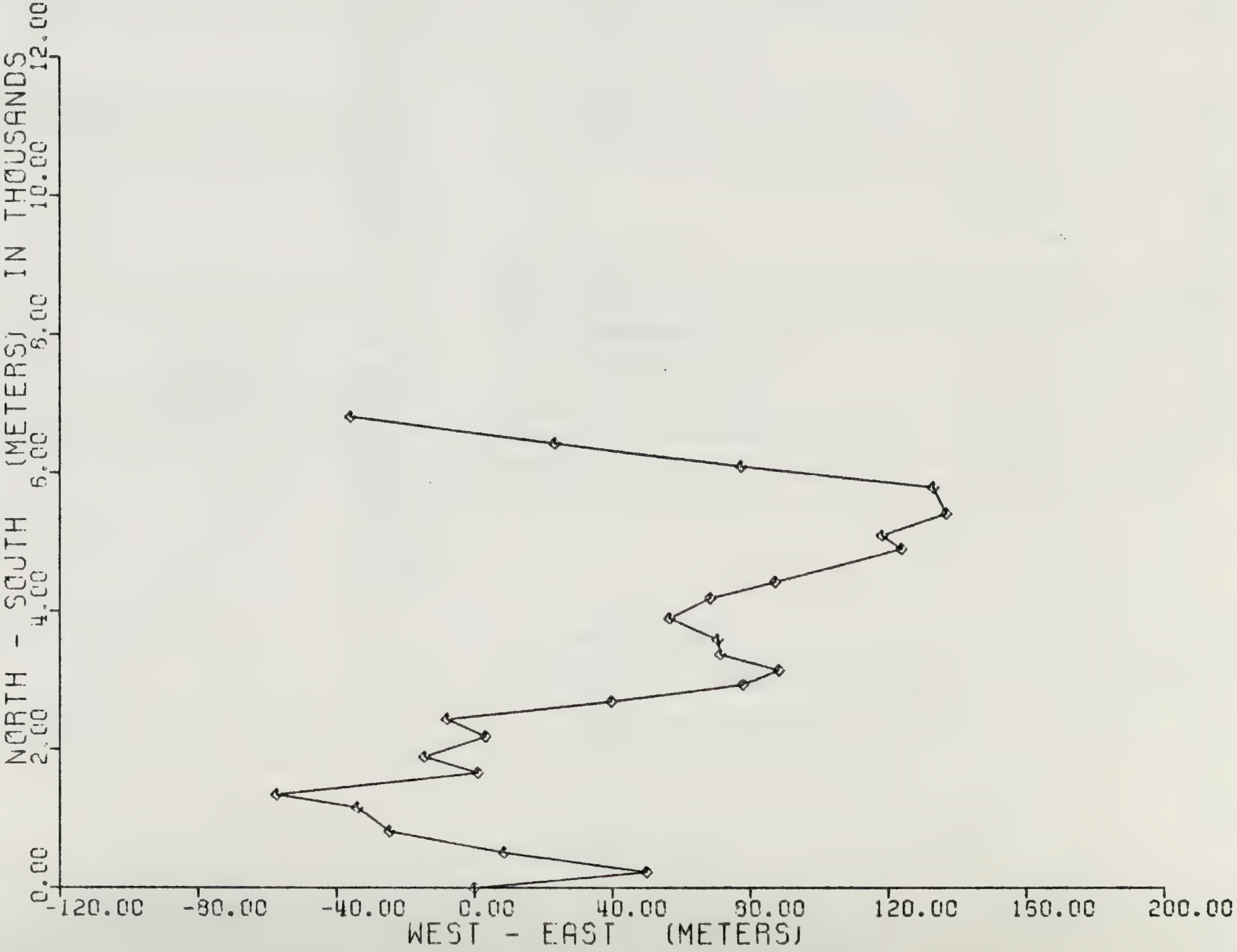

TEMPERATURE

C-B PIBAL SOUNDING

TIME 1315 DATE 9/14/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-15-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1             THEODOLITE #2

   TIME       AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0           0.0        0.0          42.5       -0.1        0.0
   0.5         283.1       43.5          40.0        2.6        7.7
   1.0         313.1       32.7          36.4        4.6        8.5
   1.5         324.1       31.3          30.3        7.0        8.8
   2.0         332.5       28.8          26.0        8.9        9.1
   2.5         336.5       26.6          22.9       10.4        9.4
   3.0         343.9       25.7          20.4       11.9        9.3
   3.5         346.8       25.5          18.8       13.1        9.2
   4.0         349.9       24.8          17.1       13.6        9.1
   4.5         353.3       22.9          16.5       13.4        9.0
   5.0         357.0       20.8          16.2       13.0        8.9
   5.5         359.5       18.4          16.0       12.7        8.8
   6.0           2.1       17.3          16.2       12.5        8.7
   6.5           4.1       16.4          16.5       12.3        8.6
   7.0           5.9       15.6          17.0       12.0        8.6
   7.5           7.7       15.0          17.4       12.0        8.3
   8.0           9.1       14.7          17.8       11.9        8.1
   8.5          11.0       14.9          18.5       11.7        7.8
   9.0          11.8       13.7          19.0       11.6        7.6
   9.5          13.0       13.0          19.5       11.3        7.3
  10.0          14.1       12.8          19.9       11.2        7.1
  10.5          15.6       12.1          20.6       10.9        6.8
  11.0          16.2       11.8          20.7       10.7        6.6
  11.5          16.4       11.5          20.3       10.7        6.3
  12.0          16.5       11.3          20.6       10.5        6.1



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        1.3        4.4
     2       56.5        4.8
     3       29.8        5.6
     4       39.4        6.6
     5        5.2        7.6
     6        1.4        9.1
     7       11.0       10.2
     8       47.4       11.8
     9       44.3       13.3
    10       39.7       15.3
    11       87.9       17.4
    12      109.4       19.7
    13      138.8       21.7
    14      157.4       23.5
    15      209.3       26.1
```

```
16     194.5      28.3
17       6.5      30.7
18     279.6      32.3
19     335.7      34.8
20     314.8      38.0
21     383.4      42.4
22     365.2      46.4
23     485.1      47.1
24     442.4      50.6


      HEIGHT  DIRECTION  SPEED   TEMP
       FEET    DEGREES   FT/SEC  DEG C

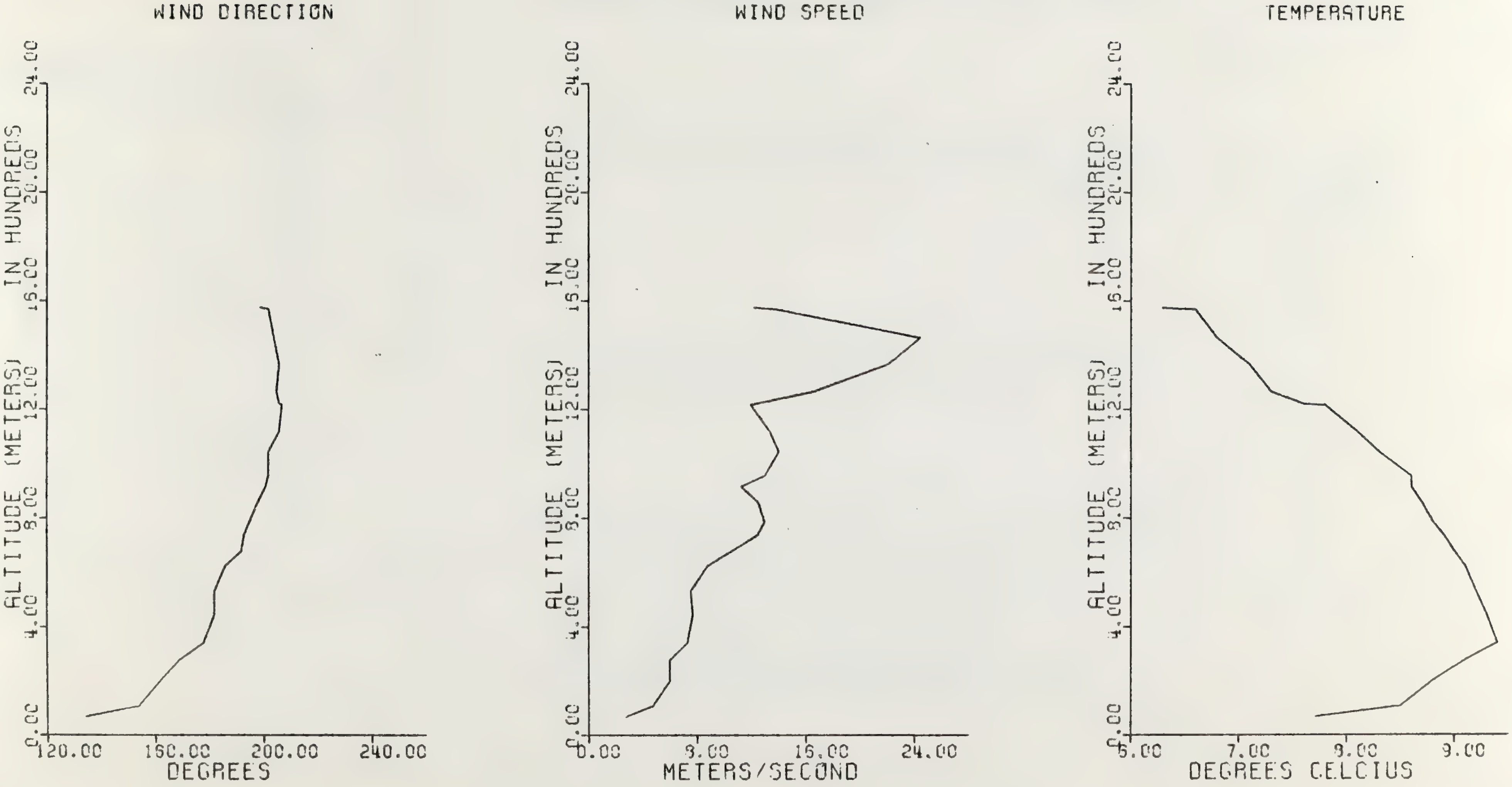
        222.     134.       9.0    7.7
        355.     154.      15.5    8.5
        659.     162.      19.7    8.8
        911.     169.      19.7    9.1
       1117.     178.      23.9    9.4
       1461.     182.      25.2    9.3
       1746.     182.      24.7    9.2
       2046.     186.      28.7    9.1
       2222.     192.      34.5    9.0
       2425.     193.      40.9    8.9
       2581.     195.      42.6    8.8
       2813.     198.      41.1    8.7
       3006.     201.      36.9    8.6
       3138.     202.      42.6    8.6
       3432.     202.      46.0    8.3
       3672.     206.      43.8    8.1
       3991.     207.      39.2    7.8
       4005.     206.      40.5    7.6
       4155.     205.      54.4    7.3
       4483.     206.      72.4    7.1
       4806.     204.      80.2    6.8
       5153.     202.      45.3    6.6
       5170.     199.      40.1    6.3


      HEIGHT  DIRECTION  SPEED   TEMP
      METERS   DEGREES   M/SEC   DEG C

         68.     134.       2.7    7.7
        108.     154.       4.7    8.5
        201.     162.       6.0    8.8
        278.     169.       6.0    9.1
        341.     178.       7.3    9.4
        445.     182.       7.7    9.3
        532.     182.       7.5    9.2
        624.     186.       8.7    9.1
        677.     192.      10.5    9.0
        739.     193.      12.5    8.9
        787.     195.      13.0    8.8
        857.     198.      12.5    8.7
        916.     201.      11.2    8.6
        957.     202.      13.0    8.6
       1046.     202.      14.0    8.3
       1119.     206.      13.4    8.1
       1217.     207.      11.9    7.8
       1221.     206.      12.3    7.6
       1266.     205.      16.6    7.3
       1367.     206.      22.1    7.1
       1465.     204.      24.4    6.8
       1570.     202.      13.8    6.6
```

C-B PIBAL SOUNDING

TIME 715 DATE 9/15/78

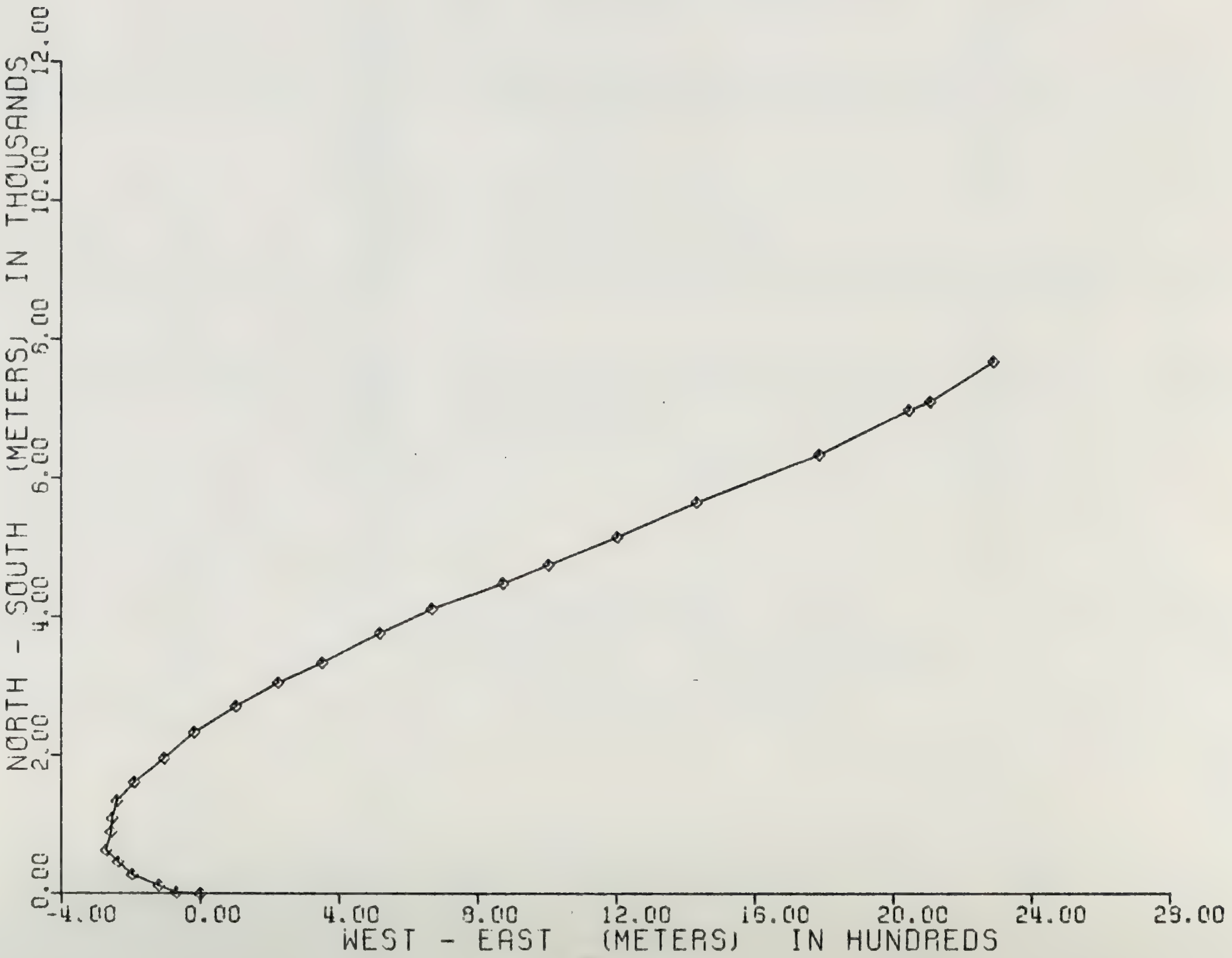


C-B PIBAL SOUNDING

TIME 715   DATE 9/15/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-15-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
    0.0           0.0        0.0            42.5       -0.1         0.0
    0.5         349.4        7.9            33.1        2.4        22.0
    1.0         353.6        4.8            28.3        2.6        21.5
    1.5         356.5        5.9            24.2        2.7        21.0
    2.0         357.8        7.3            20.9        3.0        20.5
    2.5         359.8        8.4            19.5        5.2        20.0
    3.0           2.3        9.9            19.1        6.5        19.5
    3.5           5.4        9.9            19.8        7.5        19.0
    4.0           9.3        8.7            21.6        8.2        18.5
    4.5          12.1        8.7            22.9        8.6        18.0
    5.0          14.9        8.3            24.4        8.4        17.5
    5.5          16.4        8.9            24.7        8.5        17.0
    6.0          16.8        8.2            24.4        8.8        16.8
    6.5          16.9        9.6            24.0        8.6        16.6
    7.0          17.6       10.0            24.3        8.3        16.8
    7.5          19.1       10.9            24.9        7.8        17.6
    8.0          20.3       11.5            25.8        7.4        18.0
    8.5          21.7       12.2            26.5        7.0        18.2
    9.0          23.1       12.8            27.5        7.5        18.4
    9.5          24.0       13.4            28.0        6.5        18.5
   10.0          24.9       13.3            28.7        6.3        18.7
   10.5          25.4       13.4            29.0        6.5        18.9
   11.0          26.0       13.2            29.6        7.6        18.8
   11.5          27.1       13.3            30.2        7.4        18.6
   12.0          28.0       13.4            30.9        7.7        18.3



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

   TIME      RHO        ERROR

      1       82.4        5.9
      2      122.4        7.4
      3       23.0        9.4
      4      115.5       11.4
      5       64.0       13.4
      6       75.9       15.4
      7      234.9       17.1
      8      549.8       18.2
      9      646.5       19.1
     10      672.8       19.8
     11      595.3       22.3
     12      808.8       23.0
     13      451.5       26.6
     14      257.6       27.7
     15      150.8       28.1
```
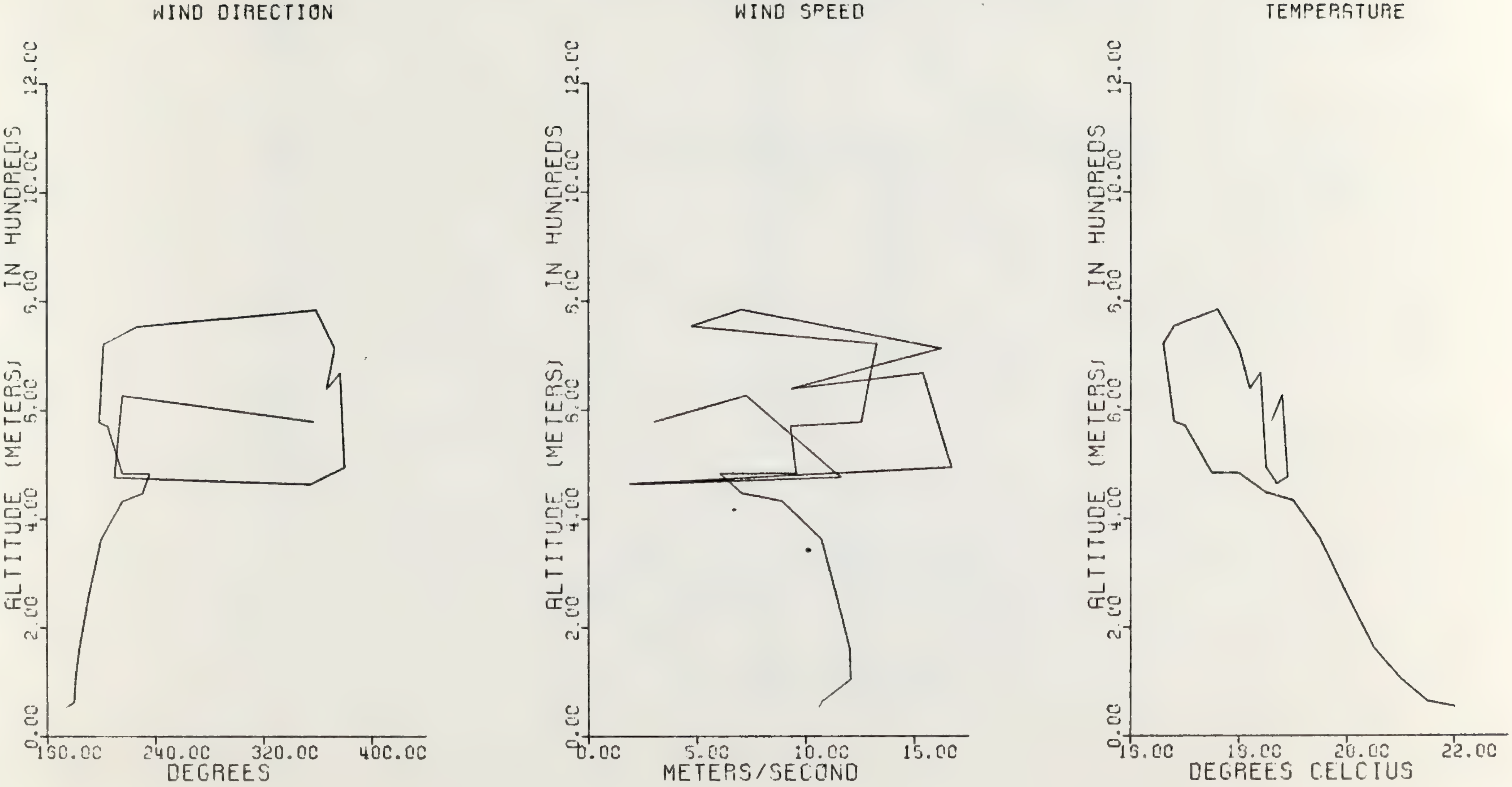

```
        16      364.0        25.4
        17      603.7        22.6
        18      582.5        22.4
        19      785.5        17.3
        20      770.5        16.6
        21      757.2        16.7
        22      577.2        20.6
        23      632.6        19.3
        24      582.7        19.8


             HEIGHT   DIRECTION   SPEED  TEMP
              FEET     DEGREES   FT/SEC  DEG C

               174.      174.      34.8  22.0
               205.      180.      35.2  21.5
               343.      181.      39.6  21.0
               531.      184.      39.4  20.5
               850.      191.      37.4  20.0
              1190.      200.      35.2  19.5
              1422.      216.      29.2  19.0
              1470.      231.      23.1  18.5
              1585.      236.      19.8  18.0
              1588.      216.      31.4  17.5
              1875.      205.      30.5  17.0
              1897.      199.      41.2  16.8
              2368.      202.      43.5  16.6
              2474.      227.      15.5  16.8
              2573.      359.      23.0  17.6
              2339.       13.      53.2  18.0
              2096.        7.      30.6  18.2
              2190.       17.      50.5  18.4
              1623.       20.      54.8  18.5
              1522.      355.       6.2  18.7
              1564.      210.      38.1  18.9
              2056.      216.      23.8  18.8
              1898.      357.      10.0  18.6


             HEIGHT   DIRECTION   SPEED  TEMP
             METERS    DEGREES    M/SEC  DEG C

                53.      174.      10.6  22.0
                63.      180.      10.7  21.5
               105.      181.      12.1  21.0
               162.      184.      12.0  20.5
               259.      191.      11.4  20.0
               363.      200.      10.7  19.5
               433.      216.       8.9  19.0
               448.      231.       7.0  18.5
               483.      236.       6.0  18.0
               484.      216.       9.6  17.5
               571.      205.       9.3  17.0
               578.      199.      12.6  16.8
               722.      202.      13.3  16.6
               754.      227.       4.7  16.8
               784.      359.       7.0  17.6
               713.       13.      16.2  18.0
               639.        7.       9.3  18.2
               668.       17.      15.4  18.4
               495.       20.      16.7  18.5
               464.      355.       1.9  18.7
               477.      210.      11.6  18.9
               627.      216.       7.3  18.8
```

C-B PIBAL SOUNDING

TIME 1330   DATE 9/15/78

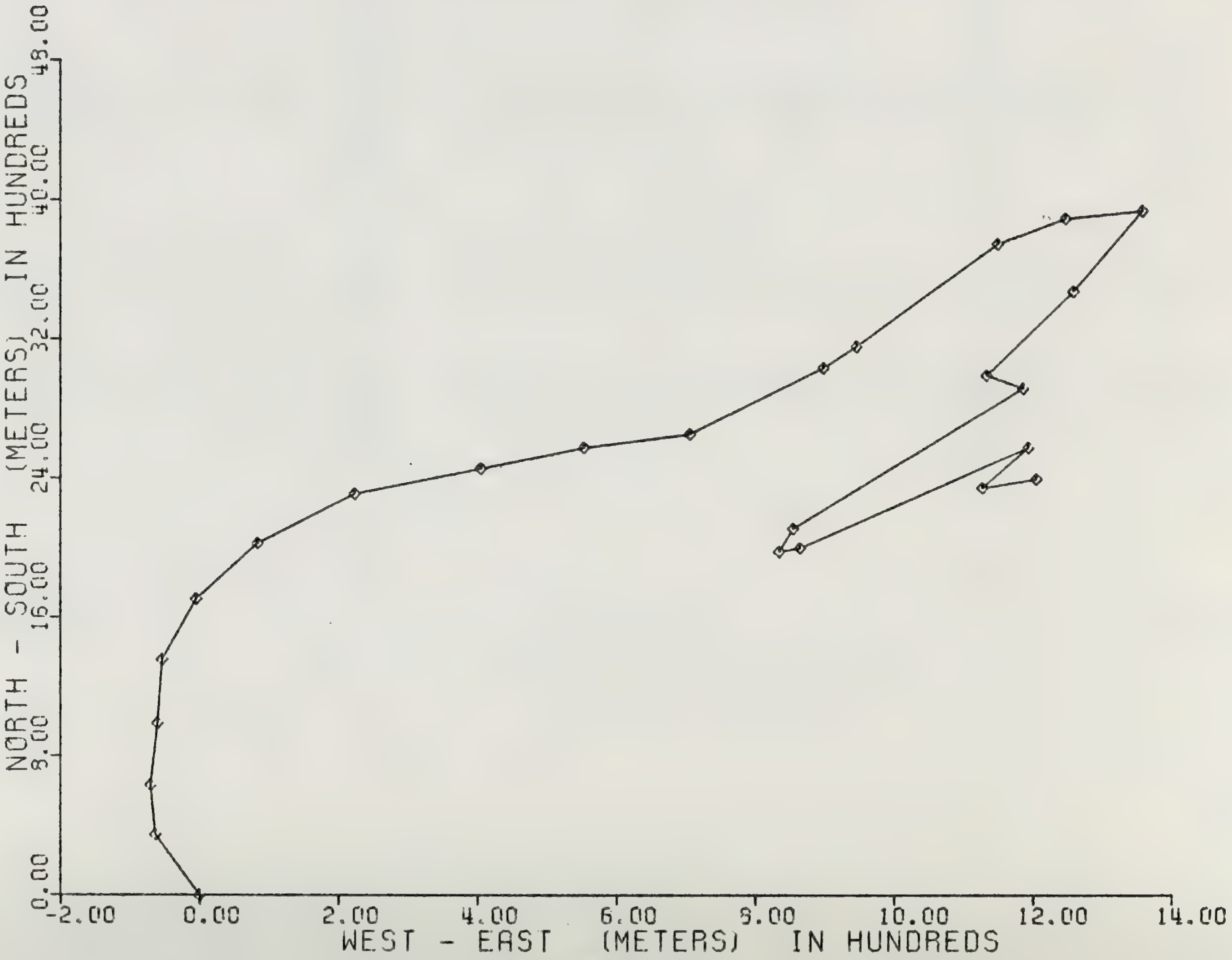


C-B PIBAL SOUNDING

TIME 1330   DATE 9/15/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: 0715 DATE: 9/18/78

UNABLE TO TRACK BALLOON DUE TO LOW VISIBILTY.

C-B PIBAL SOUNDING

TIME: 1330 DATE: 9/18/78

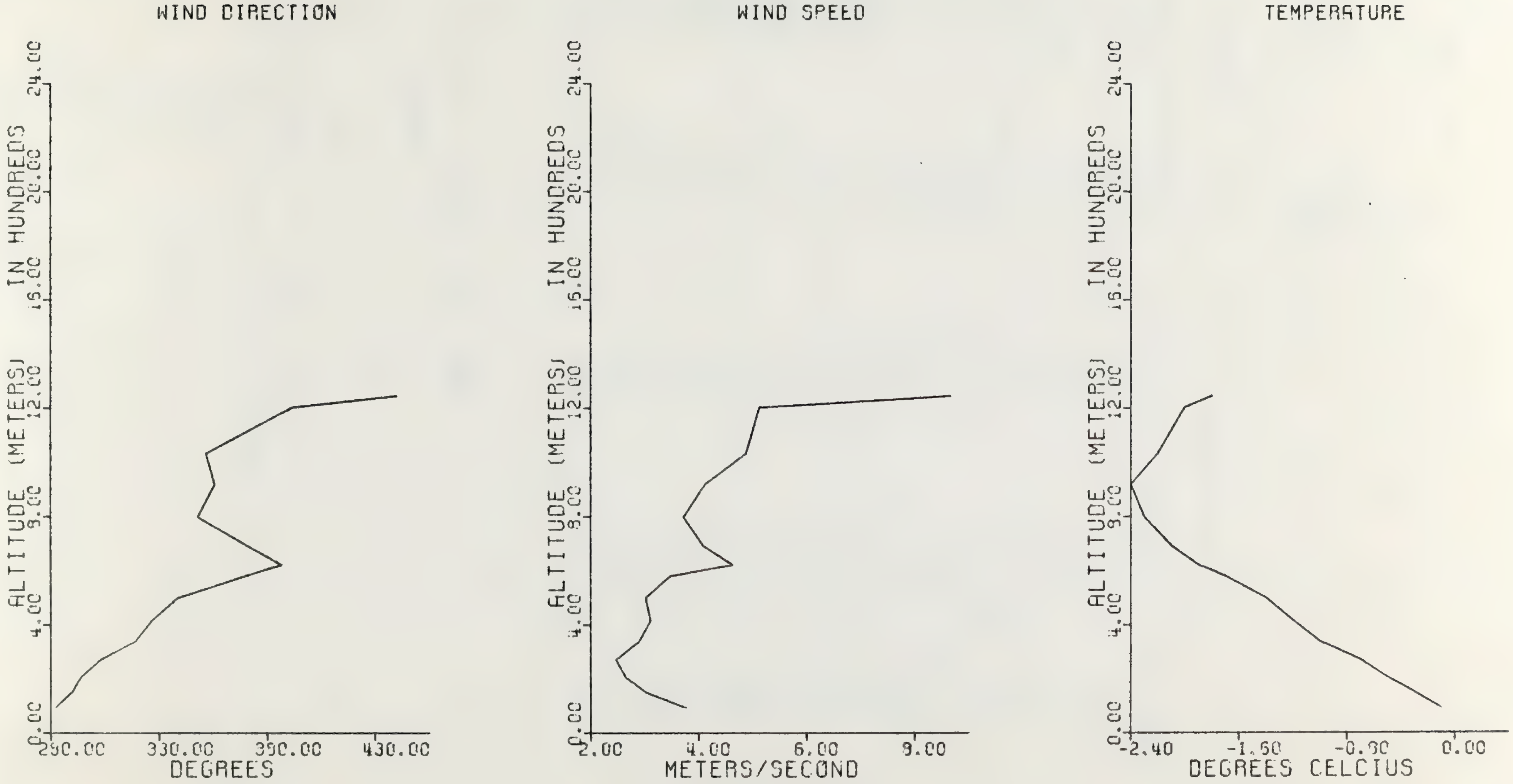
UNABLE TO TRACK BALLOON DUE TO LOW VISIBILITY.

```
C-B PIBAL SOUNDING

SOUNDING DATE  9-19-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1            THEODOLITE #2

   TIME      AZIMUTH  ELEVATION         AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0         0.0        0.0            42.5      -0.1        0.0
   0.5        96.4       34.7            46.3       3.5       -0.1
   1.0       101.0       33.6            49.5       5.3       -0.3
   1.5       104.2       33.5            52.1       7.2       -0.5
   2.0       106.2       35.0            54.3       9.3       -0.7
   2.5       110.1       36.5            56.8      11.4       -1.0
   3.0       116.1       37.6            60.2      13.8       -1.2
   3.5       120.4       38.9            63.1      16.4       -1.4
   4.0       126.3       40.2            66.3      19.0       -1.7
   4.5       136.3       40.9            69.1      21.5       -1.9
   5.0       147.0       41.6            73.1      25.1       -2.1
   5.5       149.4       41.7            77.0      28.9       -2.3
   6.0       151.2       42.1            81.3      32.6       -2.4
   6.5       154.5       41.5            86.1      36.8       -2.2
   7.0       154.8       41.2            91.8      40.9       -2.0
   7.5       163.2       40.0            96.3      48.2       -1.8
   8.0       175.4       38.9            96.9      53.1       -1.9



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        22.9        4.9
     2         2.8        5.4
     3        10.5        5.8
     4        23.7        6.2
     5        23.3        6.6
     6        13.0        7.0
     7        23.2        7.4
     8        11.5        7.7
     9        26.4        7.6
    10        11.7        7.6
    11        92.3        8.2
    12       151.2        8.8
    13       311.6        9.4
    14       525.2       10.5
    15       956.6       10.3
    16       897.4        9.1


         HEIGHT  DIRECTION  SPEED  TEMP
          FEET    DEGREES  FT/SEC DEG C

          302.     282.      12.4  -0.1
          495.     290.       9.9  -0.3
```

```
      679.      294.          8.7   -0.5
      891.      303.          8.1   -0.7
     1113.      319.          9.5   -1.0
     1368.      327.         10.2   -1.2
     1640.      339.          9.9   -1.4
     1901.       10.         11.4   -1.7
     2043.       27.         15.2   -1.9
     2269.       11.         13.4   -2.1
     2619.      348.         12.2   -2.3
     3020.      356.         13.5   -2.4
     3392.      352.         16.0   -2.2
     3949.       32.         16.8   -2.0
     4086.       80.         28.4   -1.8


    HEIGHT   DIRECTION   SPEED   TEMP
    METERS    DEGREES    M/SEC   DEG C

       92.      282.          3.8   -0.1
      151.      290.          3.0   -0.3
      207.      294.          2.7   -0.5
      272.      303.          2.5   -0.7
      339.      319.          2.9   -1.0
      417.      327.          3.1   -1.2
      500.      339.          3.0   -1.4
      580.       10.          3.5   -1.7
      623.       27.          4.6   -1.9
      692.       11.          4.1   -2.1
      798.      348.          3.7   -2.3
      920.      356.          4.1   -2.4
     1034.      352.          4.9   -2.2
     1204.       32.          5.1   -2.0
     1245.       80.          8.7   -1.8
```

C-B PIBAL SOUNDING

TIME 715   DATE 9/19/78

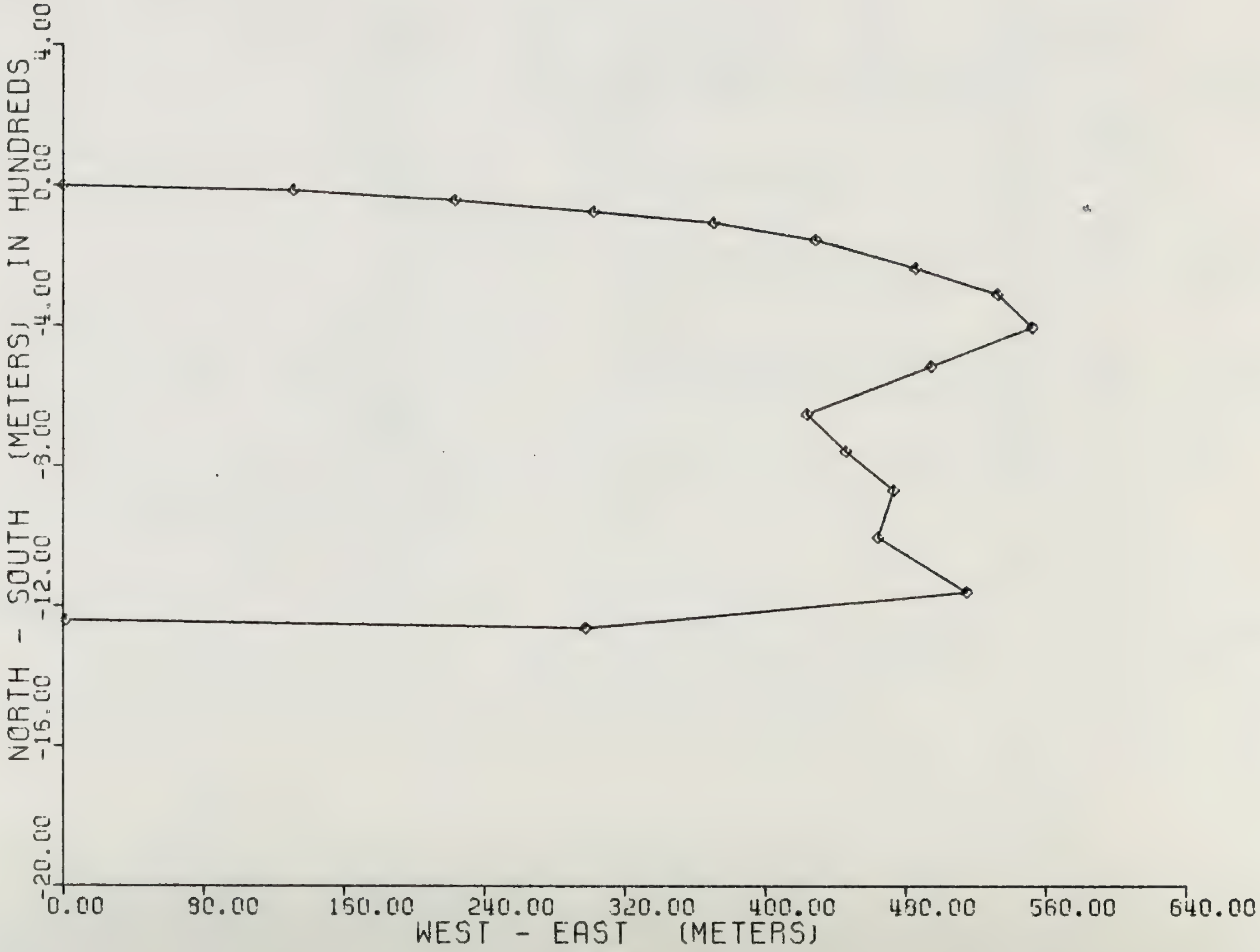


C-B PIBAL SOUNDING

TIME 715 DATE 9/19/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-19-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE             222.5
BASE LINE LENGTH (FT)      4804.2
TIME INTERVAL (SEC)          30.0
BASE LINE HEIGHT (FT)         8.0


                  THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION       AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0          0.0       0.0           42.5      -0.1        0.0
   0.5        111.0      13.0           49.1       0.9        4.8
   1.0        111.8       7.0           55.4       1.0        4.4
   1.5        113.0       5.0           62.9       1.6        4.0
   2.0        114.2       3.1           68.2       2.4        3.6
   2.5        113.9       5.7           72.1       3.4        3.2
   3.0        112.6       6.5           75.4       4.3        2.8
   3.5        112.6       7.5           78.4       4.5        2.5
   4.0        112.1       6.1           81.3       4.7        2.1
   4.5        112.5       6.3           83.8       5.0        1.7
   5.0        113.2       6.8           86.6       5.7        1.3
   5.5        113.7       7.1           88.6       6.1        0.9
   6.0        114.2       7.3           90.1       6.4        0.5
   6.5        114.6       7.6           91.8       7.0        0.1
   7.0        115.4       8.1           93.3       7.2       -0.1
   7.5        116.0       8.3           94.8       7.6       -0.3
   8.0        117.6       8.6           95.8       7.9       -0.5
   8.5        117.5       8.9           97.2       8.3       -0.7
   9.0        118.8       9.4           99.2       8.8       -1.0
   9.5        119.8       9.9          100.5       9.4       -1.7
  10.0        121.1      10.5          101.9       9.9       -2.4
  10.5        122.4      11.2          103.6      10.7       -3.1
  11.0        123.5      11.7          104.6      11.1       -3.8



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      55.2       5.0
     2      55.4       5.8
     3      18.0       7.1
     4     116.7       8.1
     5      58.2       9.1
     6      77.5      10.3
     7      19.1      11.4
     8     102.1      12.9
     9     100.9      14.0
    10     127.5      15.5
    11     136.2      16.6
    12     146.8      17.5
    13     200.7      18.7
    14     140.1      19.5
    15     172.3      20.5
    16     172.1      20.2
```

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18      178.0       22.9
19      201.1       23.5
20      173.8       23.9
21      193.2       24.7
22      164.1       24.7
```
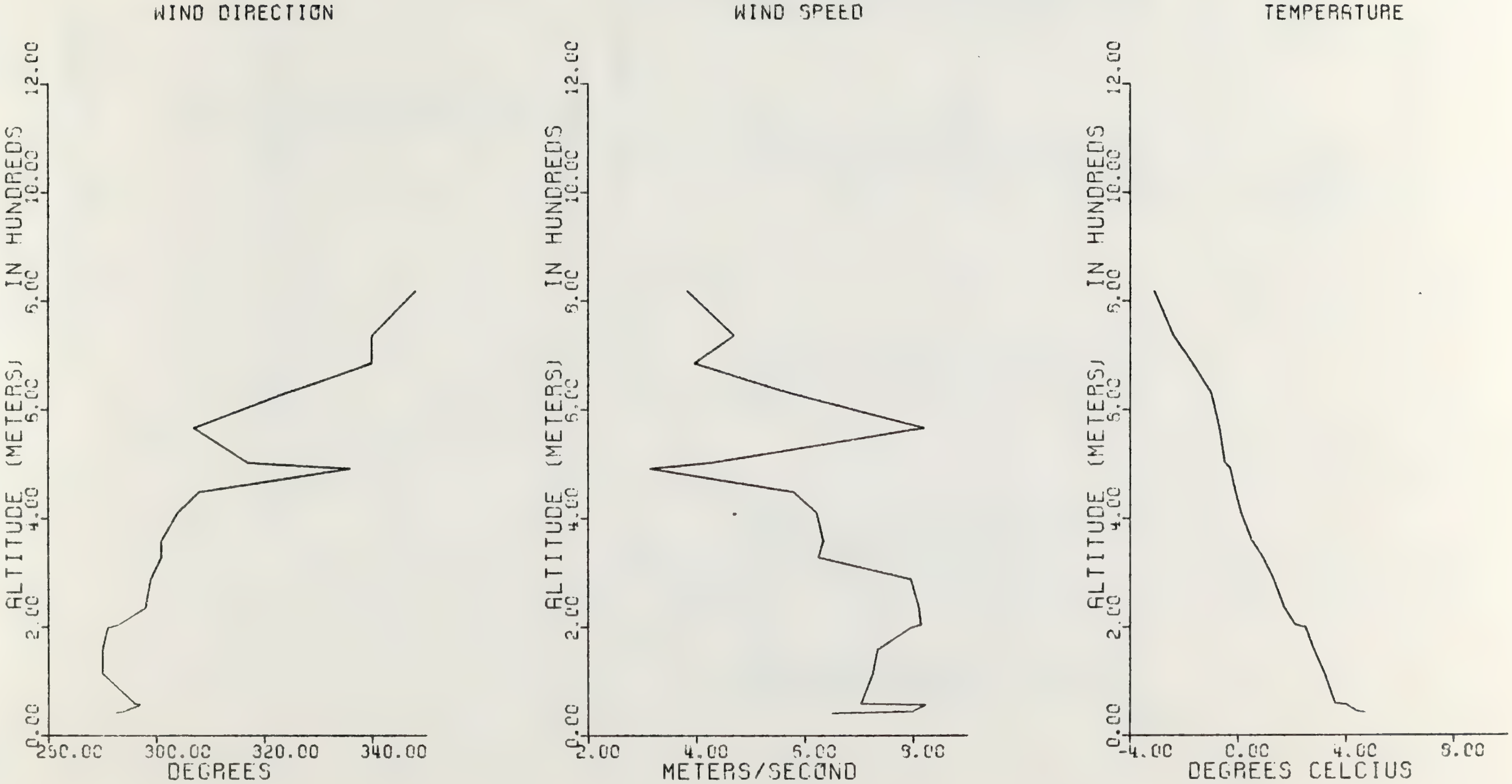

```
    HEIGHT   DIRECTION   SPEED   TEMP
     FEET     DEGREES    FT/SEC  DEG C

     135.      292.       21.3    4.8
     146.      294.       26.2    4.4
     186.      297.       27.0    4.0
     194.      296.       23.1    3.6
     376.      290.       23.8    3.2
     521.      290.       24.1    2.8
     652.      291.       26.1    2.5
     671.      293.       26.7    2.1
     772.      298.       26.6    1.7
     946.      299.       26.1    1.3
    1078.      301.       20.5    0.9
    1180.      301.       20.8    0.5
    1346.      304.       20.4    0.1
    1474.      308.       19.0   -0.1
    1615.      336.       10.3   -0.3
    1650.      317.       14.0   -0.5
    1859.      307.       26.9   -0.7
    2068.      324.       18.8   -1.0
    2249.      340.       13.0   -1.7
    2417.      340.       15.4   -2.4
    2681.      348.       12.6   -3.1
```

```
    HEIGHT   DIRECTION   SPEED   TEMP
    METERS    DEGREES    M/SEC   DEG C

      41.      292.        6.5    4.8
      45.      294.        8.0    4.4
      57.      297.        8.2    4.0
      59.      296.        7.0    3.6
     115.      290.        7.3    3.2
     159.      290.        7.3    2.8
     199.      291.        8.0    2.5
     204.      293.        8.1    2.1
     235.      298.        8.1    1.7
     288.      299.        8.0    1.3
     328.      301.        6.2    0.9
     360.      301.        6.3    0.5
     410.      304.        6.2    0.1
     449.      308.        5.8   -0.1
     492.      336.        3.1   -0.3
     503.      317.        4.3   -0.5
     567.      307.        8.2   -0.7
     630.      324.        5.7   -1.0
     686.      340.        4.0   -1.7
     737.      340.        4.7   -2.4
     817.      348.        3.8   -3.1
```

C-B PIBAL SOUNDING

TIME 1330 DATE 9/19/78

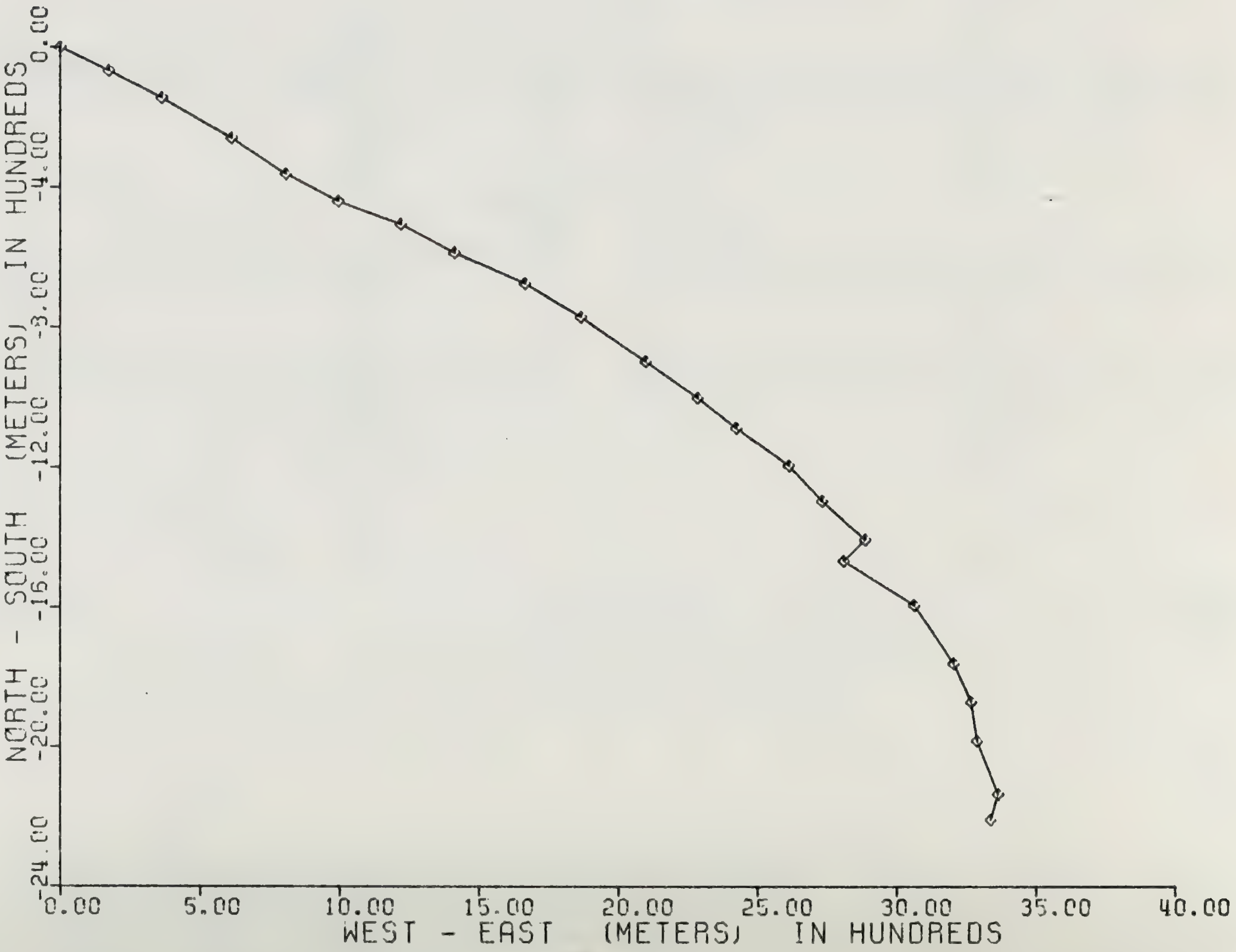


C-B PIBAL SOUNDING

TIME 1330 DATE 9/19/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-21-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1                  THEODOLITE #2

   TIME       AZIMUTH  ELEVATION          AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0             42.5       -0.1        0.0
   0.5          282.1       68.0             41.2        3.7        0.0
   1.0          292.3       82.0             41.2        6.6        0.0
   1.5          322.0       77.0             40.7        9.6        0.0
   2.0          332.2       70.0             38.4       12.2        0.0
   2.5          328.5       61.4             33.8       15.5        0.0
   3.0          324.8       58.8             31.5       17.3        0.0
   3.5          319.5       56.5             28.5       19.7        0.0
   4.0          314.5       55.2             25.5       22.5        0.0
   4.5          308.8       54.0             22.0       25.3        0.0
   5.0          306.9       53.4             19.1       27.7        0.0
   5.5          306.3       53.6             17.1       29.0        0.0
   6.0          307.9       53.9             15.3       31.9        0.0
   6.5          311.7       53.8             13.6       32.6        0.0
   7.0          315.5       53.5             13.0       33.4        0.0
   7.5          318.3       54.2             12.9       34.5        0.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        2.0       4.4
     2       34.1       4.7
     3       35.3       5.0
     4       14.7       5.4
     5       22.9       6.0
     6       24.5       6.3
     7       24.2       6.7
     8       14.9       7.0
     9       25.7       7.4
    10       32.0       7.8
    11       87.8       8.2
    12       14.9       8.8
    13       62.4       9.5
    14       18.9      10.0
    15        0.9      10.6


         HEIGHT  DIRECTION   SPEED  TEMP
          FEET    DEGREES   FT/SEC DEG C

          314.     114.        1.4   0.0
          565.     185.        2.0   0.0
          820.     162.        5.5   0.0
    1424.     140.        10.0    0.0
    1607.     125.         7.9    0.0
    1845.     116.         9.0    0.0
    2117.     106.         9.7    0.0
    2386.     107.         9.3    0.0
    2658.     116.         6.7    0.0
    2847.     133.         6.4    0.0
    3243.     155.         8.5    0.0
    3512.     171.         9.1    0.0
    3765.     180.         7.4    0.0

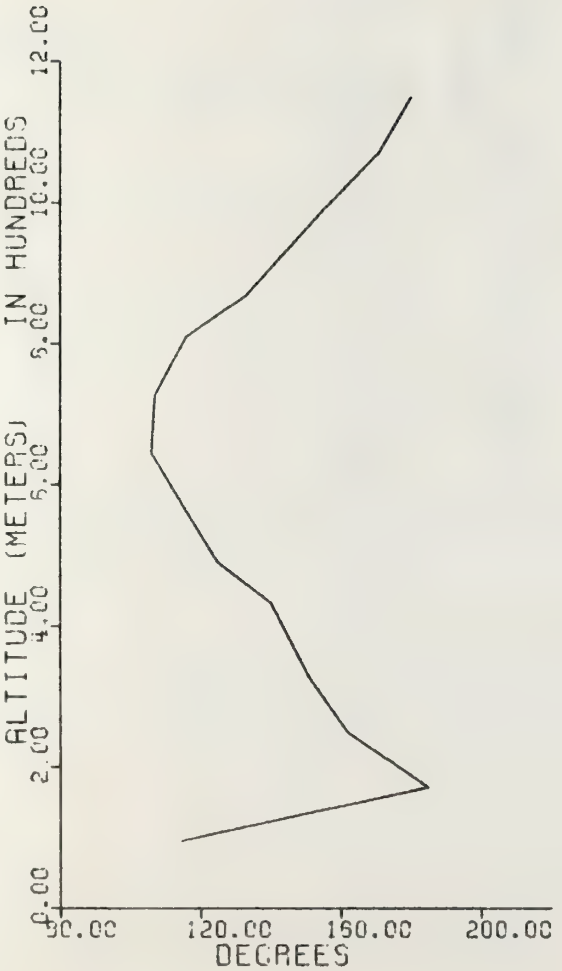

  HEIGHT   DIRECTION   SPEED   TEMP
  METERS    DEGREES    M/SEC   DEG C

      96.     114.         0.4    0.0
     172.     185.         0.6    0.0
     250.     162.         1.7    0.0
     327.     151.         3.0    0.0
     434.     140.         3.0    0.0
     490.     125.         2.4    0.0
     562.     116.         2.7    0.0
     645.     106.         3.0    0.0
     727.     107.         2.8    0.0
     810.     116.         2.0    0.0
     868.     133.         2.0    0.0
     988.     155.         2.6    0.0
    1071.     171.         2.8    0.0
    1148.     180.         2.3    0.0
```

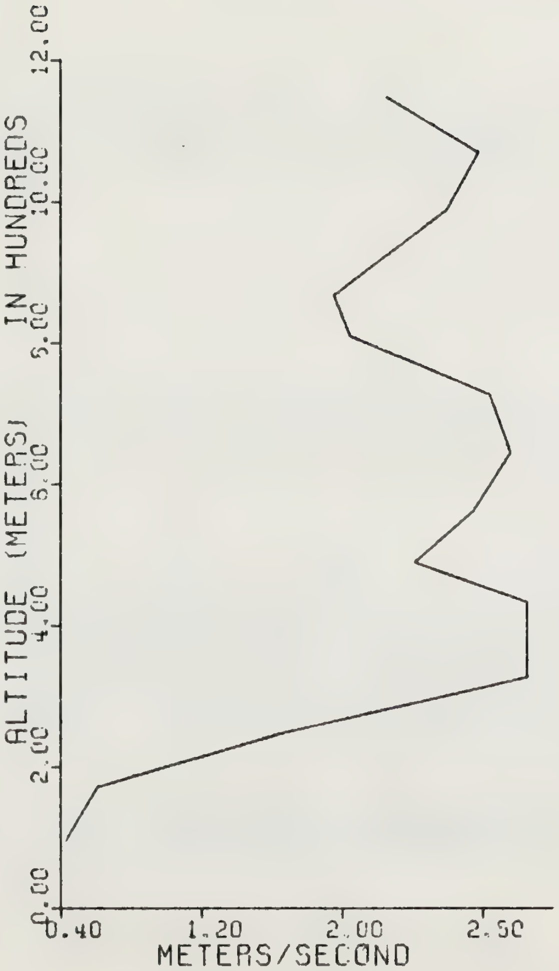
C-B PIBAL SOUNDING

TIME 715   DATE 9/21/78

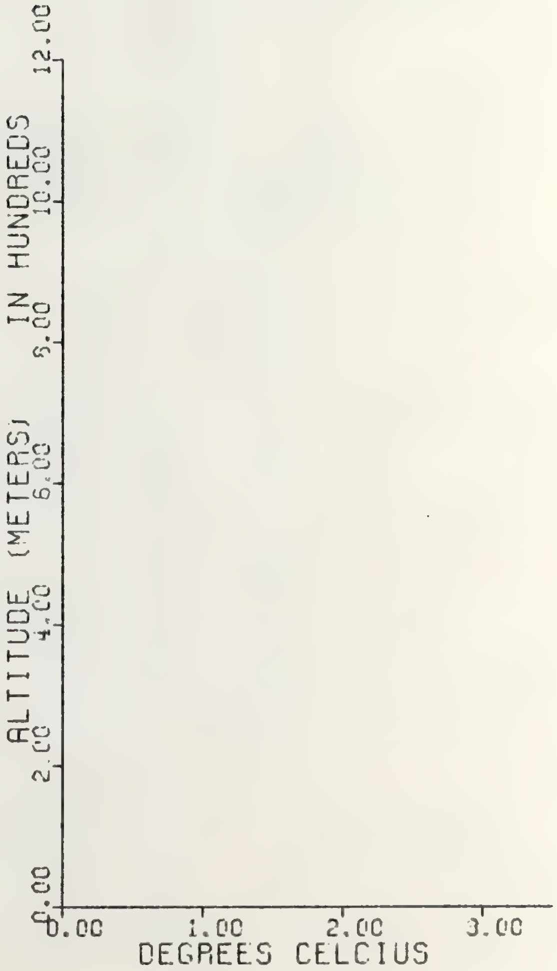
WIND DIRECTION



WIND SPEED



TEMPERATURE

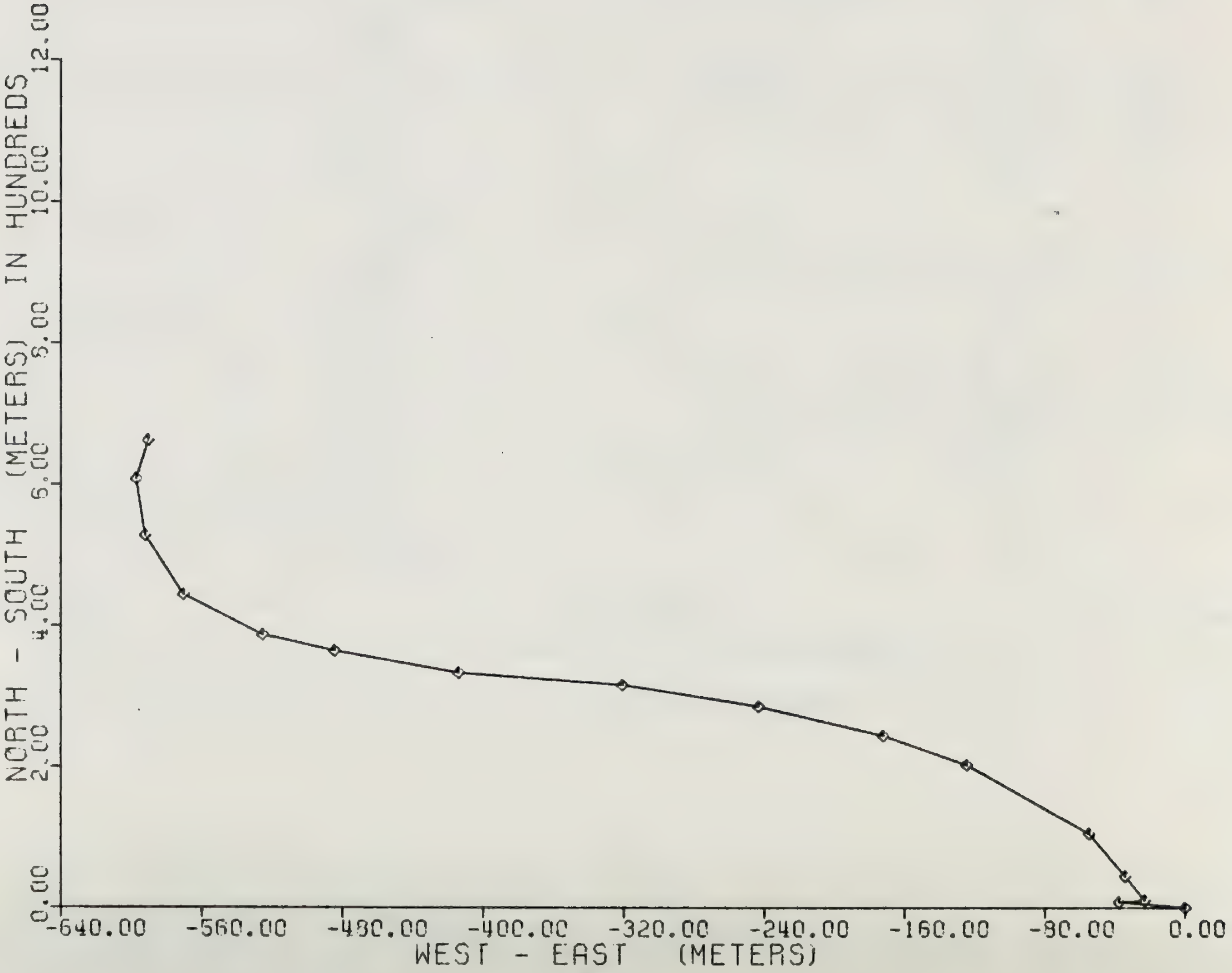


C-B PIBAL SOUNDING

TIME 715   DATE 9/21/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-21-78

BALLOON RELEASED 1330 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1              THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
   0.0          0.0        0.0           42.5      -0.1        0.0
   0.5        141.1       47.7           46.4       4.3       10.6
   1.0        139.4       59.4           48.8       9.5       11.9
   1.5        149.3       63.6           49.7      15.4       11.4
   2.0        158.1       68.5           49.8      20.4       10.9
   2.5        161.8       69.9           50.1      23.3       10.5
   3.0        158.1       72.7           49.0      26.0       10.0
   3.5        157.9       80.4           45.8      28.2        9.6
   4.0        300.0       75.8           41.4      30.3        9.1
   4.5        348.0       71.3           35.9      30.8        8.6
   5.0        349.8       61.8           31.9      30.4        8.2
   5.5        350.1       53.6           26.7      29.3        7.7
   6.0        350.7       50.0           22.7      28.5        7.3
   6.5        351.2       47.7           19.7      27.5        7.0
   7.0        351.6       43.6           17.3      26.9        6.7
   7.5        352.0       41.2           15.7      26.8        6.4
   8.0        353.2       39.1           14.3      26.4        6.1
   8.5        354.0       37.6           13.4      26.6        5.8
   9.0        355.1       36.6           12.8      26.8        5.5
   9.5        355.9       37.3           12.6      27.0        5.3
  10.0        356.7       36.1           12.5      27.2        5.0
  10.5        357.1       35.9           12.3      27.5        4.7
  11.0        357.3       35.5           11.7      27.4        4.4
  11.5        357.5       35.8           11.4      27.2        4.1
  12.0        357.7       34.6           11.2      27.1        3.7



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        4.0        4.6
     2       43.2        5.1
     3       26.8        5.5
     4       24.3        5.8
     5       24.6        6.1
     6      106.1        6.4
     7      112.7        6.8
     8      564.6        7.0
     9      261.8        8.5
    10      368.3        9.4
    11      323.0       10.5
    12      121.0       11.6
    13      107.9       12.4
    14       76.3       13.9
    15       33.5       15.2
    16      63.9       16.7
    17      10.9       18.4
    18      49.0       20.1
    19     102.8       20.6
    20      53.4       22.2
    21      90.6       23.2
    22      40.9       24.3
    23     119.9       24.4
    24      38.1       25.7


          HEIGHT  DIRECTION  SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

           364.     320.       8.3  10.6
           825.     339.       5.1  11.9
          1282.      18.       4.2  11.4
          1695.      39.       2.7  10.9
          1939.     100.       0.2  10.5
          2201.     165.       5.3  10.0
          2479.     140.      17.4   9.6
          2608.     168.      23.1   9.1
          3211.     187.      25.2   8.6
          3412.     172.      25.6   8.2
          3625.     171.      25.3   7.7
          3896.     170.      20.2   7.3
          4073.     173.      23.2   7.0
          4353.     175.      26.5   6.7
          4659.     178.      26.7   6.4
          5012.     180.      28.8   6.1
          5436.     182.      28.8   5.8
          5902.     186.      18.3   5.5
          6142.     189.      17.3   5.3
          6537.     186.      21.6   5.0
          6850.     182.      17.6   4.7
          7139.     180.      10.6   4.4
          7185.     182.      13.4   4.1


          HEIGHT  DIRECTION  SPEED  TEMP
          METERS   DEGREES   M/SEC  DEG C

           111.     320.       2.5  10.6
           251.     339.       1.6  11.9
           391.      18.       1.3  11.4
           517.      39.       0.8  10.9
           591.     100.       0.1  10.5
           671.     165.       1.6  10.0
           756.     140.       5.3   9.6
           795.     168.       7.0   9.1
           979.     187.       7.7   8.6
          1040.     172.       7.8   8.2
          1105.     171.       7.7   7.7
          1187.     170.       6.2   7.3
          1242.     173.       7.1   7.0
          1327.     175.       8.1   6.7
          1420.     178.       8.1   6.4
          1528.     180.       8.8   6.1
          1657.     182.       8.8   5.8
          1799.     186.       5.6   5.5
          1872.     189.       5.3   5.3
          1992.     186.       6.6   5.0
          2088.     182.       5.4   4.7
          2176.     180.       3.2   4.4
          2190.     182.       4.1   4.1
```
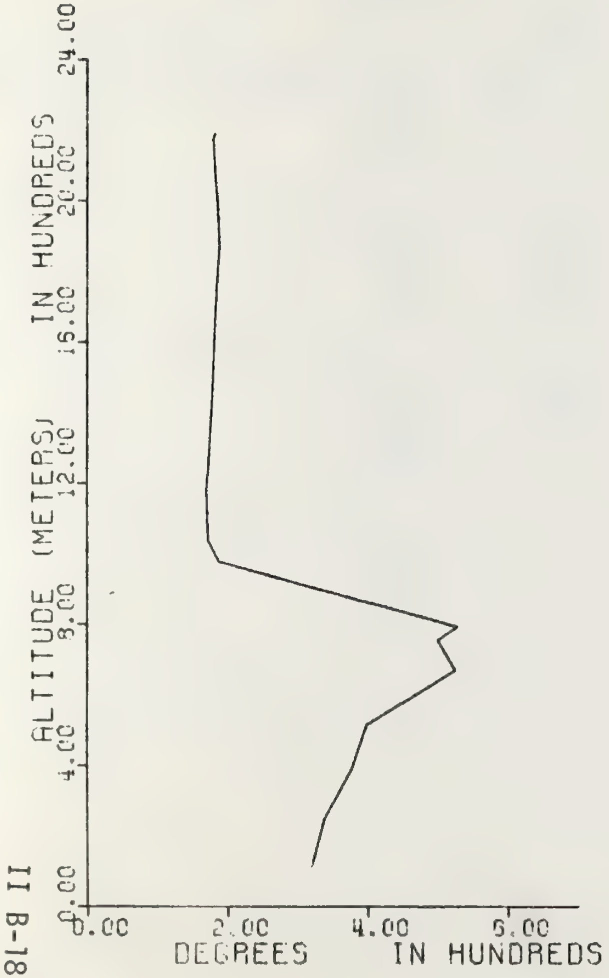
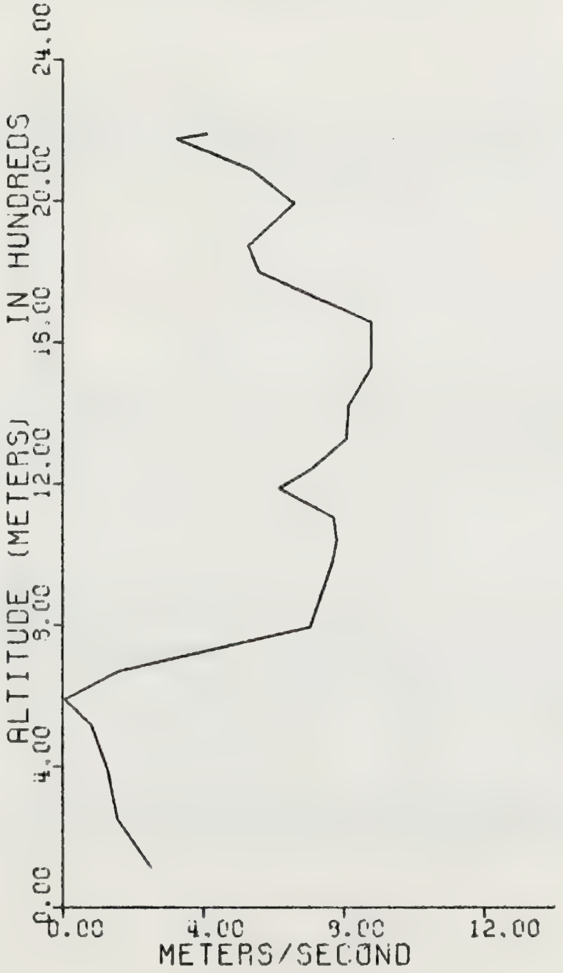

C-B PIBAL SOUNDING

TIME 1330 DATE 9/21/78

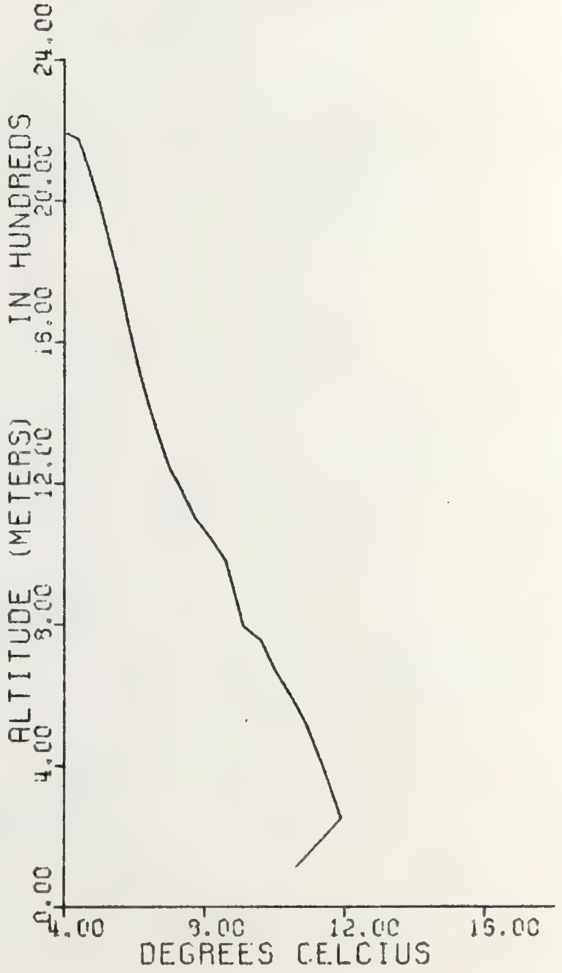
WIND DIRECTION



WIND SPEED



TEMPERATURE

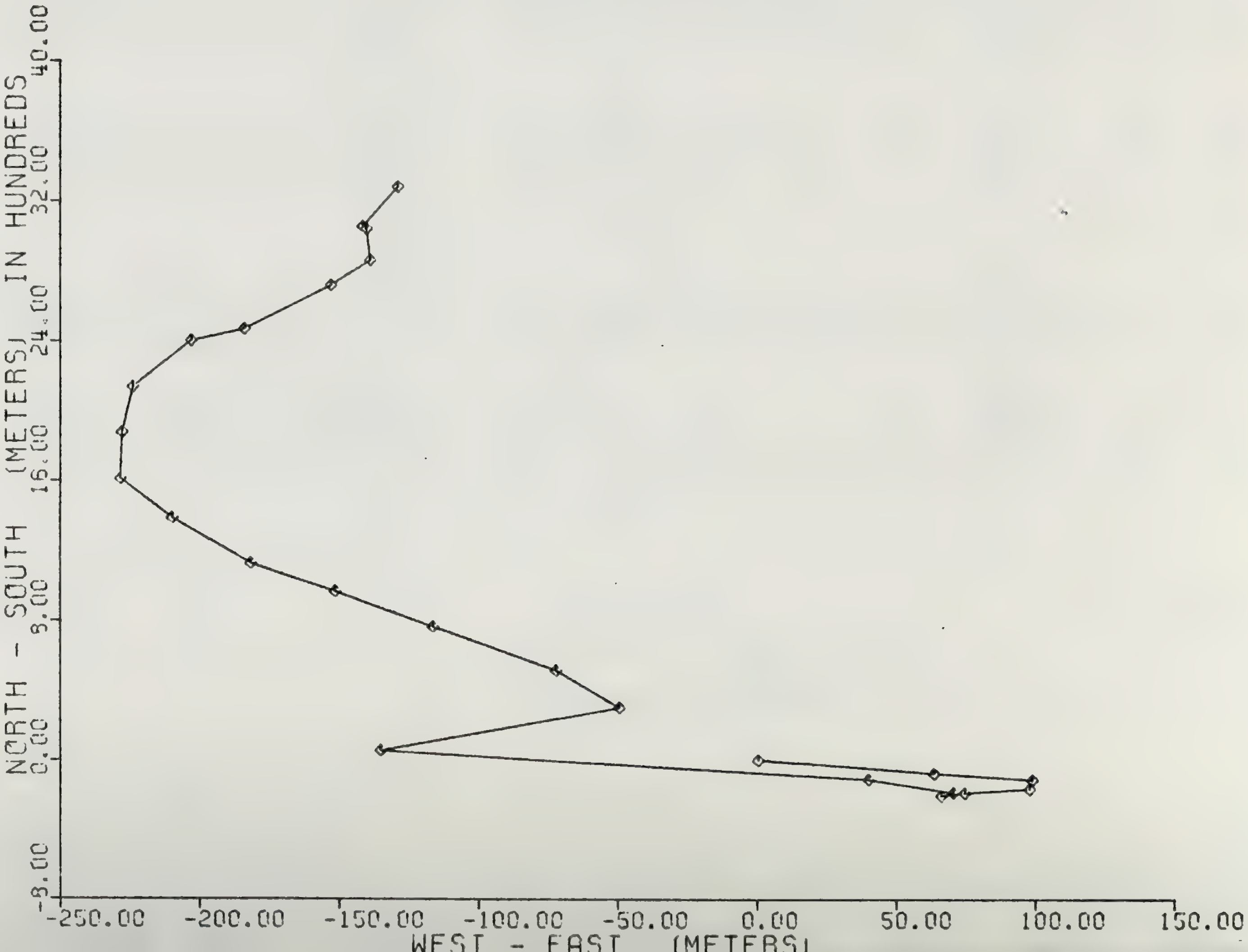


C-B PIBAL SOUNDING

TIME 1330   DATE 9/21/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-22-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1                THEODOLITE #2

   TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0           0.0        0.0           42.5       -0.1           0.0
   0.5         276.9       35.5           39.1        3.1           6.1
   1.0         294.3       51.5           37.7        6.1           5.8
   1.5         320.8       52.9           35.5        9.0           6.1
   2.0         339.2       42.5           31.1       10.6           6.4
   2.5         347.2       30.1           25.2       11.6           6.8
   3.0         350.3       25.1           21.2       11.7           7.1
   3.5         352.8       21.7           18.1       12.2           7.5
   4.0         354.8       20.6           17.1       12.5           7.6
   4.5         356.1       19.6           16.4       12.8           7.5
   5.0         358.6       19.2           16.6       12.9           7.3
   5.5           1.8       18.6           17.3       13.0           7.2
   6.0           4.4       18.1           18.1       13.1           7.1
   6.5           7.9       17.5           19.2       13.1           6.9
   7.0          11.0       17.1           20.7       13.2           6.8
   7.5          12.9       17.0           21.7       13.4           6.7
   8.0          14.9       16.8           22.8       13.3           6.5
   8.5          16.9       16.4           24.1       13.2           6.4
   9.0          18.8       16.1           25.0       13.1           6.3
   9.5          20.7       15.9           26.3       13.1           5.9
  10.0          22.6       15.5           27.6       13.1           5.5
  10.5          23.9       15.3           28.4       13.0           5.1
  11.0          25.2       15.1           29.3       13.0           4.7
  11.5          26.5       14.9           30.1       12.9           4.3
  12.0          27.8       14.7           31.0       13.0           3.9



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1       13.4       4.4
     2        6.1       4.7
     3        8.4       5.2
     4       53.5       6.2
     5       16.5       8.0
     6       45.4       9.8
     7       12.1      12.0
     8       38.2      13.5
     9      105.9      14.8
    10      101.1      16.1
    11      124.6      17.8
    12      163.5      19.3
    13      169.9      21.9
    14      218.0      23.9
    15      261.1      25.3
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                 16          63.9         16.7
        16      244.5        26.6
        17      291.3        27.6
        18      266.4        30.2
        19      301.0        31.4
        20      385.0        33.2
        21      374.1        35.0
        22      412.7        36.6
        23      393.0        39.3
        24      467.3        42.3

            HEIGHT   DIRECTION   SPEED   TEMP
             FEET     DEGREES   FT/SEC  DEG C

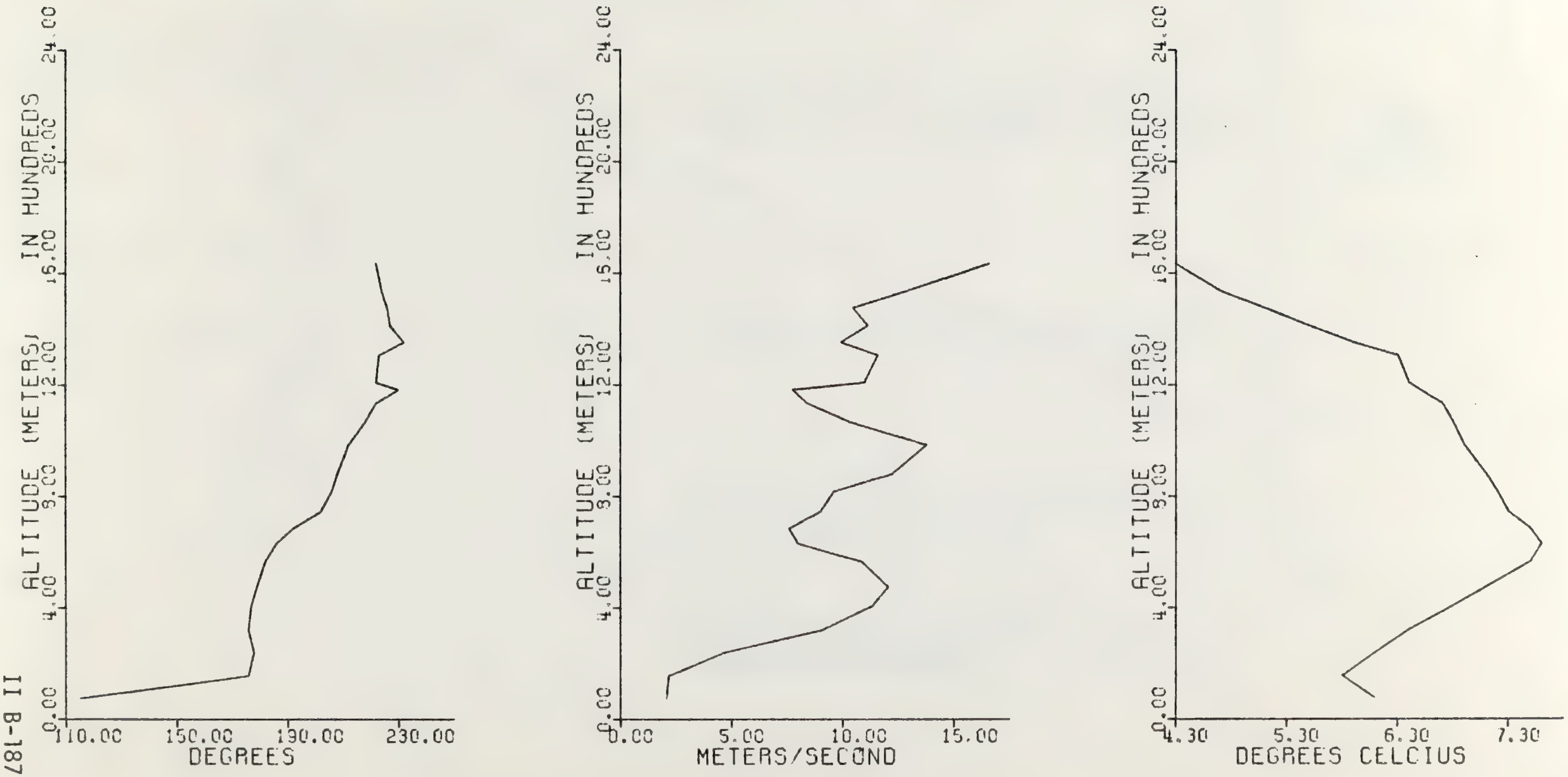
             248.      115.        6.8    6.1
             513.      176.        7.1    5.8
             793.      178.       15.4    6.1
            1053.      176.       29.8    6.4
            1333.      177.       37.2    6.8
            1559.      179.       39.5    7.1
            1857.      182.       35.6    7.5
            2069.      186.       26.2    7.6
            2247.      192.       24.9    7.5
            2444.      202.       29.5    7.3
            2682.      206.       31.5    7.2
            2886.      208.       40.0    7.1
            3230.      212.       45.2    6.9
            3501.      218.       33.9    6.8
            3721.      222.       27.5    6.7
            3882.      230.       25.4    6.5
            3967.      222.       36.0    6.4
            4289.      223.       38.0    6.3
            4439.      232.       32.5    5.9
            4634.      227.       36.5    5.5
            4842.      226.       34.3    5.1
            5037.      224.       42.3    4.7
            5358.      222.       54.3    4.3

            HEIGHT   DIRECTION   SPEED   TEMP
            METERS    DEGREES    M/SEC  DEG C

              76.      115.        2.1    6.1
             156.      176.        2.2    5.8
             242.      178.        4.7    6.1
             321.      176.        9.1    6.4
             406.      177.       11.3    6.8
             475.      179.       12.0    7.1
             566.      182.       10.9    7.5
             631.      186.        8.0    7.6
             685.      192.        7.6    7.5
             745.      202.        9.0    7.3
             817.      206.        9.6    7.2
             880.      208.       12.2    7.1
             984.      212.       13.8    6.9
            1067.      218.       10.3    6.8
            1134.      222.        8.4    6.7
            1183.      230.        7.7    6.5
            1209.      222.       11.0    6.4
            1307.      223.       11.6    6.3
            1353.      232.        9.9    5.9
            1412.      227.       11.1    5.5
            1476.      226.       10.5    5.1
            1535.      224.       12.9    4.7
```

C-B PIBAL SOUNDING

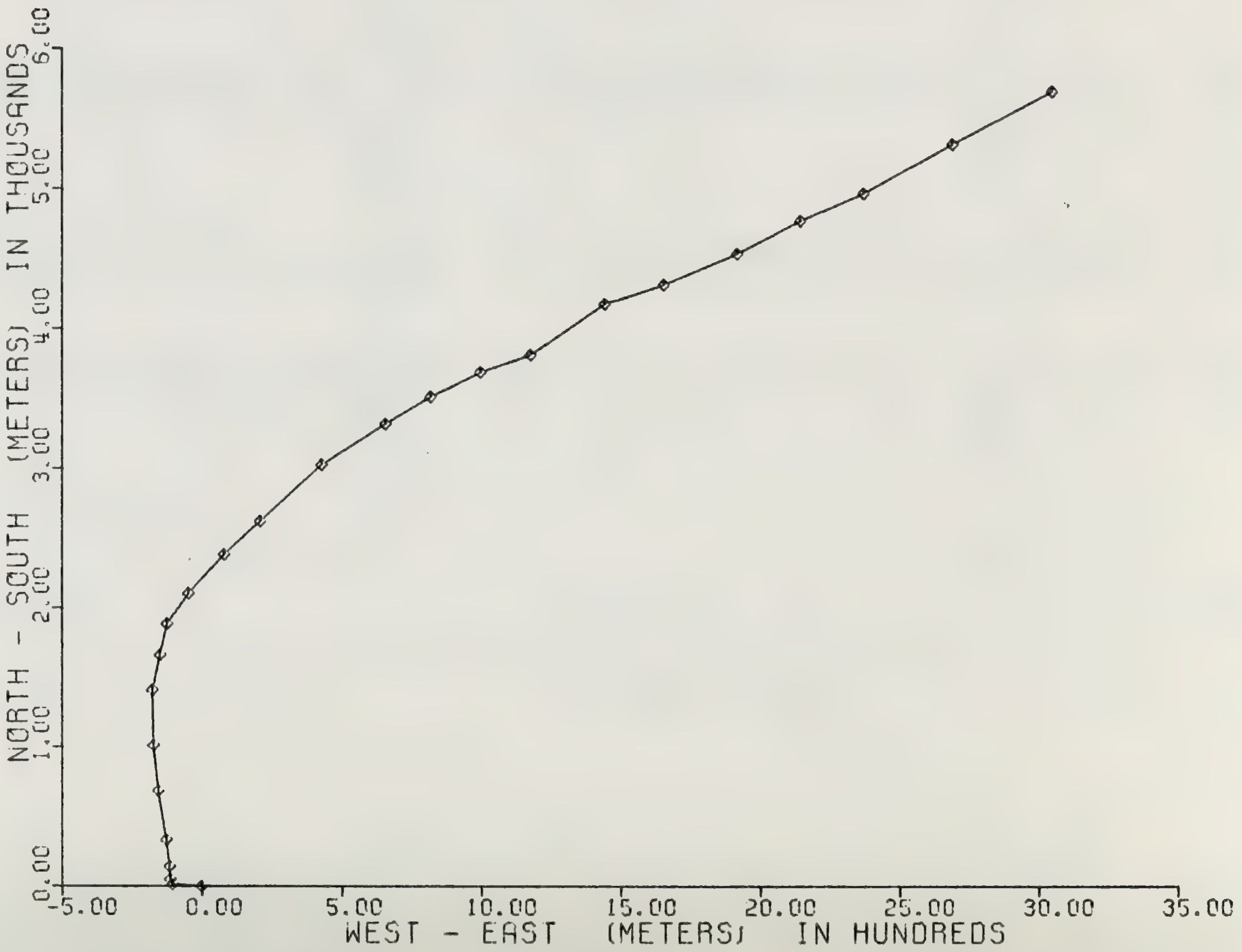
TIME 715 DATE 9/22/78



WIND DIRECTION

WIND SPEED

TEMPERATURE



C-B PIBAL SOUNDING

TIME 715   DATE 9/22/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL

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C-B PIBAL SOUNDING

SOUNDING DATE  9-22-78                                  ** SUSPECT DATA **

BALLOON RELEASED 1400 MST


BASE LINE ANGLE               222.5
BASE LINE LENGTH (FT)        4804.2
TIME INTERVAL (SEC)            30.0
BASE LINE HEIGHT (FT)           8.0


                THEODOLITE #1            THEODOLITE #2

   TIME       AZIMUTH  ELEVATION        AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0           42.5       -0.1         0.0
   0.5           46.2       31.6           44.4        2.2        23.9
   1.0           21.6       35.7           43.4        5.9        24.1
   1.5           22.3       30.4           38.8       10.3        24.3
   2.0           21.6       26.7           36.0       11.6        24.5
   2.5           21.1       25.9           33.1       12.0        24.7
   3.0           23.0       22.8           33.1       12.0        24.9
   3.5           24.8       21.8           33.1       12.1        25.1
   4.0           26.4       19.8           33.1       11.9        25.3
   4.5           22.3       19.0           33.5       11.1        25.5
   5.0           17.0       20.8           34.9       11.4        25.7
   5.5            7.2       22.1           35.3       11.3        25.7
   6.0            5.5       22.2           36.7       12.7        25.3
   6.5            2.8       21.7           37.6       12.8        25.0
   7.0            1.3       21.5           38.7       13.2        24.6
   7.5            0.0       21.9           39.7       13.5        24.3
   8.0          359.4       20.5           40.5       13.8        23.9
   8.5          358.2       20.4           40.9       14.1        23.6
   9.0          356.8       19.9           41.3       13.8        23.2
   9.5          356.6       19.6           41.6       13.5        22.9



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1      148.6        4.9
     2      322.7        5.2
     3      242.0        7.6
     4      202.6        9.4
     5       19.3       11.0
     6       44.9       12.7
     7        1.9       14.2
     8        4.2       16.4
     9      273.5       12.7
    10      487.3        9.3
    11      589.7        7.3
    12      798.6        6.7
    13      865.3        6.2
    14      945.5        5.8
    15      997.2        5.5
    16     1065.6        5.2
    17     1102.9        5.1
    18     1091.5        4.9
    19     1075.1        4.8
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HEIGHT  DIRECTION  SPEED   TEMP
 FEET    DEGREES   FT/SEC  DEG C

  213.     204.      8.8   23.9
  408.     198.     24.3   24.1
 1083.     201.     37.7   24.3
 1452.     198.     32.2   24.5
 1793.     204.     31.2   24.7
 1973.     212.     29.5   24.9
 2179.     213.     34.3   25.1
 2410.      36.     12.7   25.3
 1701.      32.     65.1   25.5
 1213.      31.     50.3   25.7
  861.      29.     24.0   25.7
  772.      17.     10.1   25.3
  640.      15.      8.4   25.0
  544.      10.      6.3   24.6
  480.       7.      5.3   24.3
  381.       7.      3.8   23.9
  347.       9.      2.5   23.6
  296.       5.      2.1   23.2


HEIGHT  DIRECTION  SPEED   TEMP
METERS   DEGREES   M/SEC   DEG C

   65.     204.      2.7   23.9
  124.     198.      7.4   24.1
  330.     201.     11.5   24.3
  442.     198.      9.8   24.5
  547.     204.      9.5   24.7
  601.     212.      9.0   24.9
  664.     213.     10.5   25.1
  735.      36.      3.9   25.3
  518.      32.     19.8   25.5
  370.      31.     15.3   25.7
  262.      29.      7.3   25.7
  235.      17.      3.1   25.3
  195.      15.      2.6   25.0
  166.      10.      1.9   24.6
  146.       7.      1.6   24.3
  116.       7.      1.2   23.9
  106.       9.      0.8   23.6
   90.       5.      0.6   23.2
```
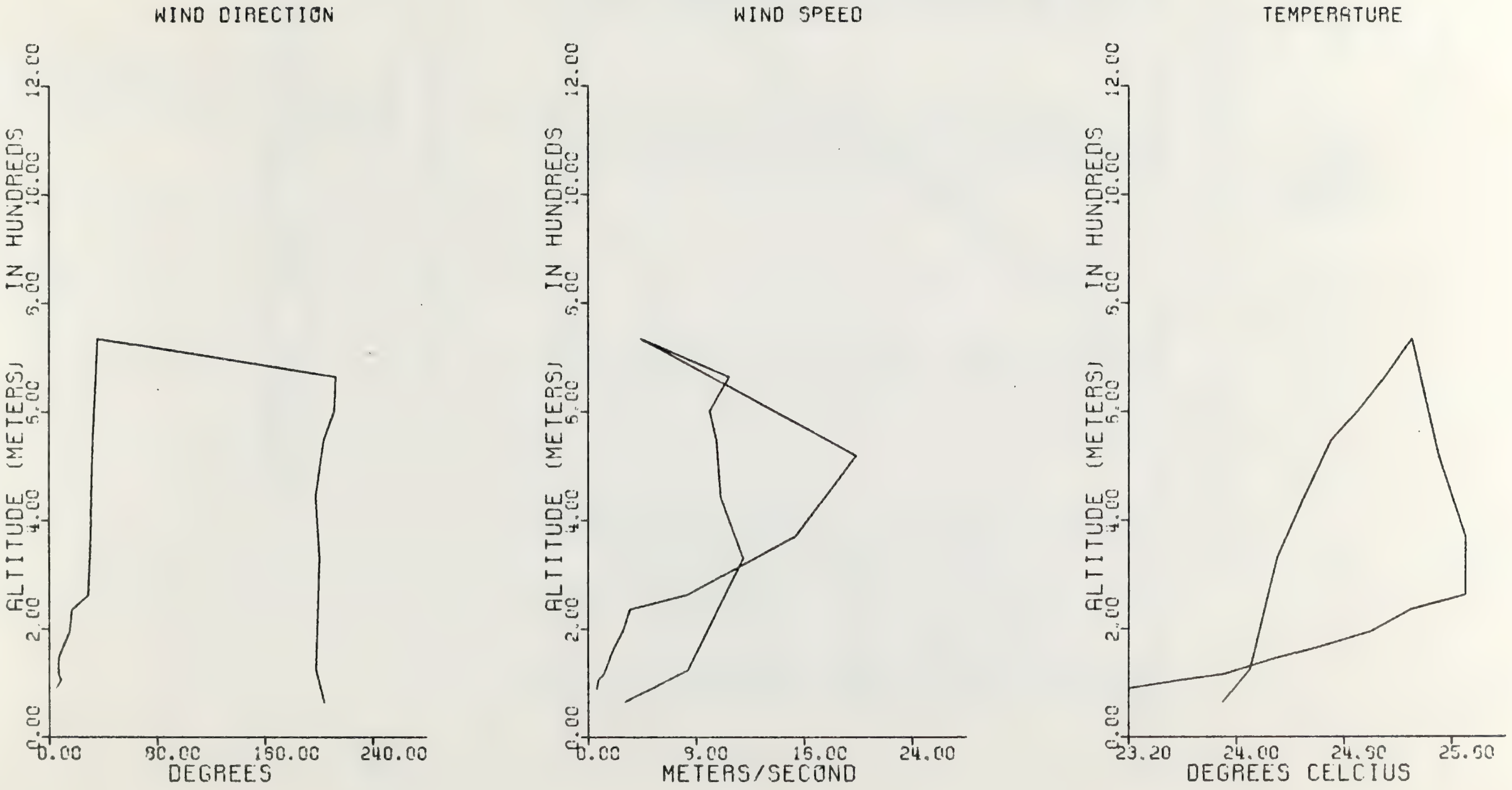

C-B PIBAL SOUNDING

TIME 1400   DATE 9/22/78

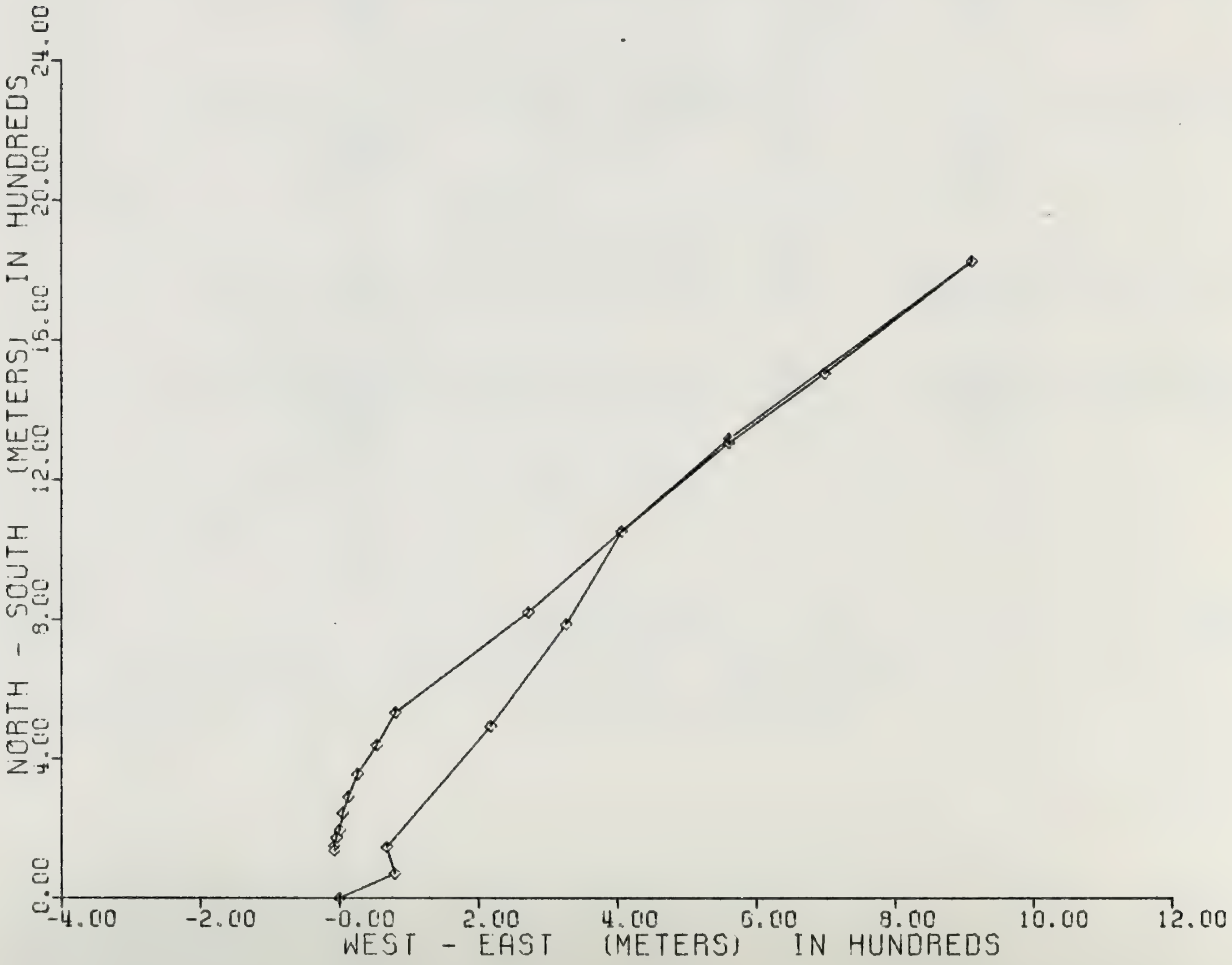


C-B PIBAL SOUNDING

TIME 1400 DATE 9/22/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-8 PIBAL SOUNDING

SOUNDING DATE  9-25-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                 THEODOLITE #1              THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1          0.0
   0.5          254.8       22.2            37.1        2.7          9.5
   1.0          293.6       29.5            32.3        5.8         12.9
   1.5          303.0       29.9            27.3        8.2         12.9
   2.0          307.2       28.6            21.6       10.7         12.9
   2.5          309.1       28.5            13.1       14.4         12.9
   3.0          311.3       28.3            10.5       15.5         12.9
   3.5          314.8       28.8             8.7       16.6         13.0
   4.0          317.9       29.5             6.9       17.9         12.4
   4.5          320.4       30.0             6.0       18.9         11.9
   5.0          323.1       31.5             5.5       20.4         11.3
   5.5          323.8       34.3             5.6       22.6         10.8
   6.0          322.8       38.3             5.5       25.5         10.2
   6.5          321.5       40.2             5.5       27.1          9.7
   7.0          318.8       43.2             5.0       29.6          9.1
   7.5          311.5       58.3             4.3       34.5          8.5
   8.0          307.7       51.1             4.1       37.7          7.9
   8.5          297.4       56.2             3.9       42.5          7.3
   9.0          285.9       59.1             5.4       48.7          6.7
   9.5          269.4       61.5             5.9       55.6          6.0
  10.0          255.0       61.0             4.8       63.1          5.4
  10.5          245.6       59.4             1.4       69.4          4.8
  11.0          238.4       56.9           345.4       76.7          4.2
  11.5          234.2       53.9           312.6       80.5          3.6



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO        ERROR

     1       77.3         4.3
     2       10.2         4.9
     3       29.1         5.5
     4       20.8         6.2
     5       41.0         7.4
     6       32.7         8.0
     7       34.4         8.7
     8       36.1         9.5
     9       18.0        10.2
    10       12.8        10.9
    11        1.6        11.3
    12       26.9        11.5
    13       10.4        11.4
    14       28.1        11.5
    15      973.5        10.8
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II B-1877

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   17      130.8       11.0
   18       26.6       10.8
   19       54.1       10.7
   20       63.3       10.9
   21       83.1       11.3
   22      122.6       12.3
   23      127.8       13.2


           HEIGHT  DIRECTION   SPEED   TEMP
            FEET    DEGREES    FT/SEC DEG C

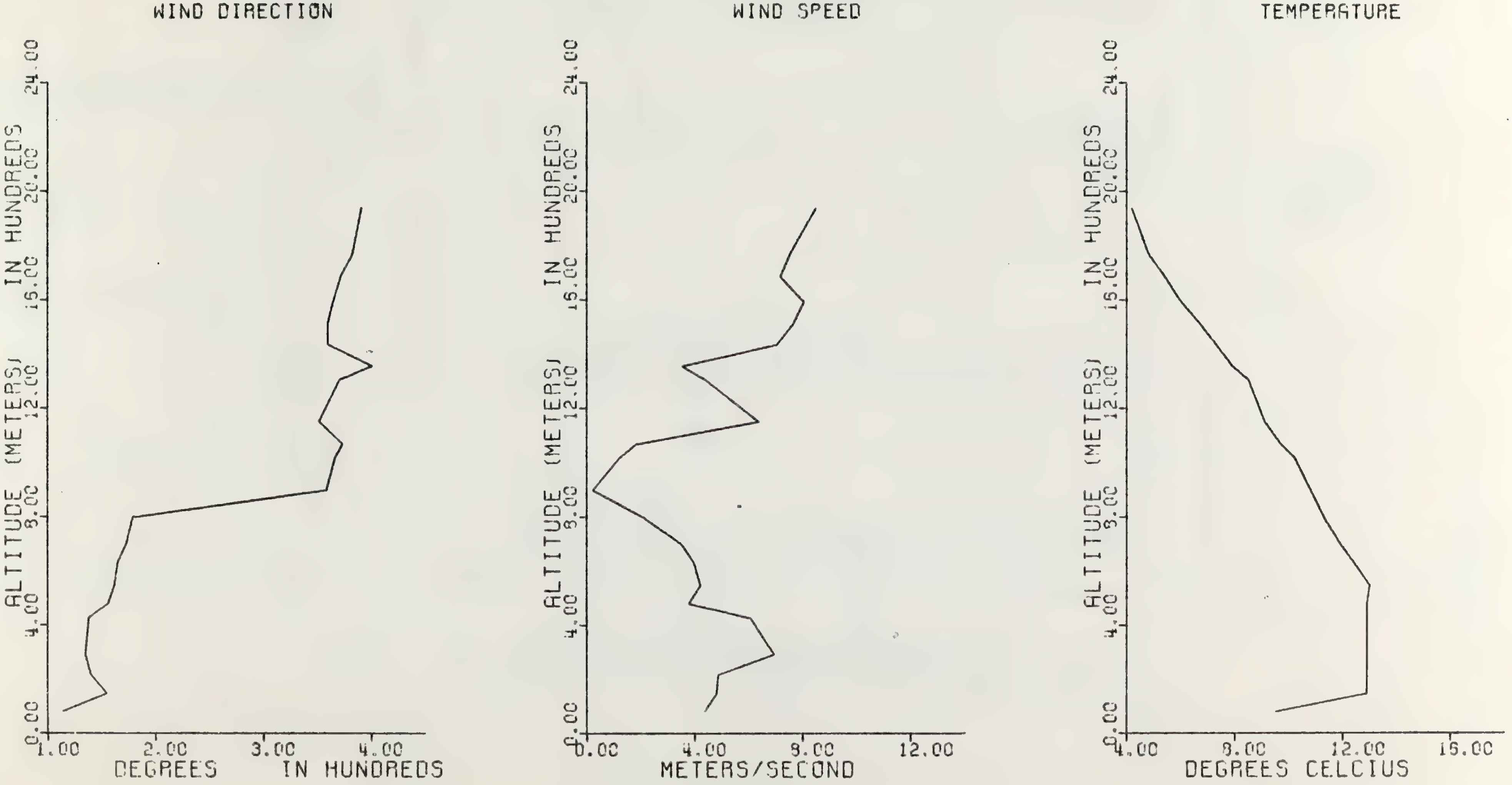
             262.     114.      14.3    9.5
             482.     155.      15.8   12.9
             714.     140.      16.0   12.9
             960.     135.      22.8   12.9
            1402.     138.      19.9   12.9
            1577.     156.      12.4   12.9
            1798.     162.      13.8   13.0
            2073.     165.      13.0   12.4
            2297.     173.      11.5   11.9
            2618.     179.       6.9   11.3
            2951.     359.       0.7   10.8
            3343.       7.       4.0   10.2
            3507.      14.       6.0    9.7
            3776.     352.      20.9    9.1
            4281.      11.      14.4    8.5
            4448.      41.      11.6    7.9
            4707.       0.      23.1    7.3
            4962.       0.      25.1    6.7
            5224.       5.      26.4    6.0
            5531.      12.      23.5    5.4
            5805.      23.      24.7    4.8
            6349.      31.      27.8    4.2


           HEIGHT  DIRECTION   SPEED   TEMP
           METERS   DEGREES    M/SEC   DEG C

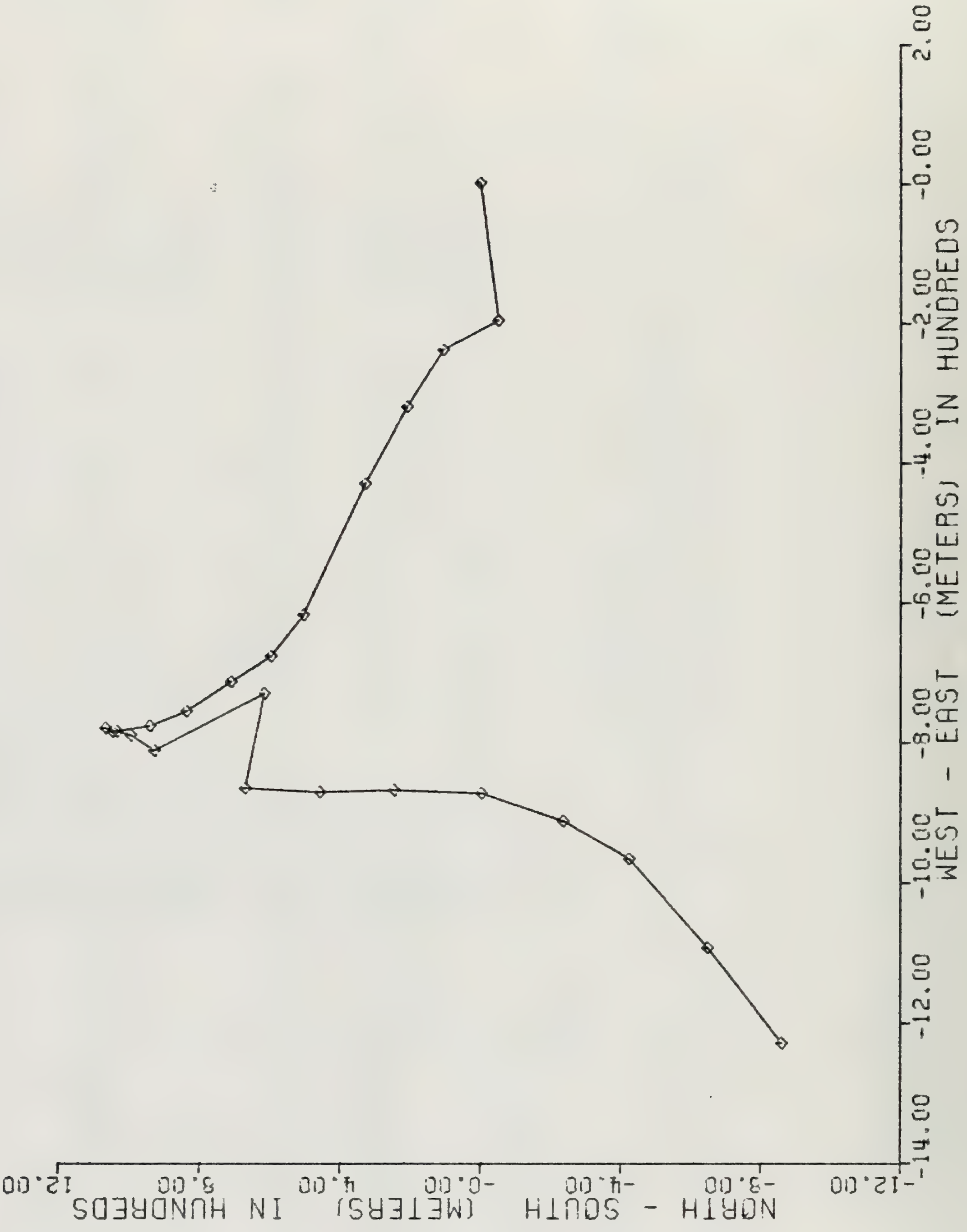
              80.     114.       4.4    9.5
             147.     155.       4.8   12.9
             218.     140.       4.9   12.9
             293.     135.       6.9   12.9
             427.     138.       6.1   12.9
             481.     156.       3.8   12.9
             548.     162.       4.2   13.0
             632.     165.       4.0   12.4
             700.     173.       3.5   11.9
             798.     179.       2.1   11.3
             899.     359.       0.2   10.8
            1019.       7.       1.2   10.2
            1069.      14.       1.8    9.7
            1151.     352.       6.4    9.1
            1305.      11.       4.4    8.5
            1356.      41.       3.5    7.9
            1435.       0.       7.0    7.3
            1512.       0.       7.7    6.7
            1592.       5.       8.0    6.0
            1686.      12.       7.2    5.4
            1769.      23.       7.5    4.8
            1935.      31.       8.5    4.2
```

C-B PIBAL SOUNDING

TIME 715 DATE 9/25/78



16 244.5 26.6



C-B PIBAL SOUNDING

TIME 715 DATE 9/25/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL

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C-B PIBAL SOUNDING

SOUNDING DATE  9-25-78                                ** SUSPECT DATA **

BALLOON RELEASED 1330 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1               THEODOLITE #2

  TIME      AZIMUTH  ELEVATION        AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0          0.0       0.0            42.5      -0.1        0.0
  0.5        110.8      18.5            47.6       1.8       22.6
  1.0        108.3      23.0            53.1       5.7       22.3
  1.5        108.2      25.2            56.5       7.5       22.0
  2.0        112.1      23.2            62.6       9.3       21.7
  2.5        116.3      19.8            69.8      10.1       21.4
  3.0        119.5      16.8            75.3       9.8       21.0
  3.5        124.9      14.1            83.5       9.2       20.7
  4.0        130.0       8.9            90.7       6.8       20.4
  4.5        134.6       6.0            96.7       5.2       20.1
  5.0        136.4       4.8           100.0       4.5       20.1
  5.5        137.4       4.4           102.5       4.2       20.5
  6.0        138.9       4.5           105.8       4.3       20.9
  6.5        139.6       4.9           108.2       4.9       21.2
  7.0        140.4       5.9           110.9       6.1       21.6
  7.5        141.4       6.3           113.5       6.5       22.0
  8.0        142.4       6.2           116.4       6.5       21.6
  8.5        142.7       6.7           119.0       7.2       21.2
  9.0        142.6       9.6           120.6      10.4       20.9
  9.5        143.4      11.7           122.0      12.5       20.5
 10.0        144.0      13.0           123.3      13.6       20.1
 10.5        145.3      13.5           129.0      14.9       19.8
 11.0        147.1      13.4           132.7      15.0       18.8
 11.5        148.5      13.2           138.0      14.2       17.8
 12.0        150.2      13.0           140.5      13.8       16.8



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

 TIME      RHO       ERROR

    1       4.8       4.8
    2      76.2       5.7
    3      40.6       6.4
    4      42.9       7.3
    5      44.3       8.5
    6      38.9       9.4
    7      22.2      10.6
    8      25.8      11.7
    9      52.3      12.4
   10      70.1      13.1
   11      62.6      13.7
   12      46.7      14.5
   13      71.7      15.4
   14     102.7      16.4
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16      93.6        18.7
17     127.8        20.5
18     199.4        22.3
19     188.7        23.1
20     128.9        24.0
21     335.4        30.2
22     399.4        33.9
23     256.7        46.1
24     156.3        49.6


      HEIGHT  DIRECTION   SPEED  TEMP
       FEET    DEGREES   FT/SEC DEG C

        161.     289.      18.5  22.6
        486.     287.      17.0  22.3
        716.     297.      18.1  22.0
        951.     304.      26.3  21.7
       1114.     310.      26.6  21.4
       1145.     320.      30.1  21.0
       1187.     330.      34.9  20.7
        897.     341.      30.6  20.4
        690.     344.      22.7  20.1
        606.     336.      16.4  20.1
        589.     335.      18.0  20.5
        641.     334.      19.5  20.9
        755.     331.      20.5  21.2
        987.     333.      22.2  21.6
       1117.     335.      24.9  22.0
       1190.     330.      32.1  21.6
       1428.     324.      33.4  21.2
       2220.     330.      22.0  20.9
       2773.     344.      15.5  20.5
       3161.     332.      68.1  20.1
       4250.     335.      96.7  19.8
       4766.     335.     153.3  18.8
       6256.     337.     151.7  17.8


      HEIGHT  DIRECTION   SPEED  TEMP
      METERS   DEGREES    M/SEC  DEG C

         49.     289.       5.6  22.6
        148.     287.       5.2  22.3
        218.     297.       5.5  22.0
        290.     304.       8.0  21.7
        340.     310.       8.1  21.4
        349.     320.       9.2  21.0
        362.     330.      10.6  20.7
        273.     341.       9.3  20.4
        210.     344.       6.9  20.1
        185.     336.       5.0  20.1
        179.     335.       5.5  20.5
        195.     334.       5.9  20.9
        230.     331.       6.2  21.2
        301.     333.       6.8  21.6
        340.     335.       7.6  22.0
        363.     330.       9.8  21.6
        435.     324.      10.2  21.2
        677.     330.       6.7  20.9
        845.     344.       4.7  20.5
        964.     332.      20.8  20.1
       1295.     335.      29.5  19.8
       1453.     335.      46.7  18.8
       1907.     337.      46.2  17.8
```
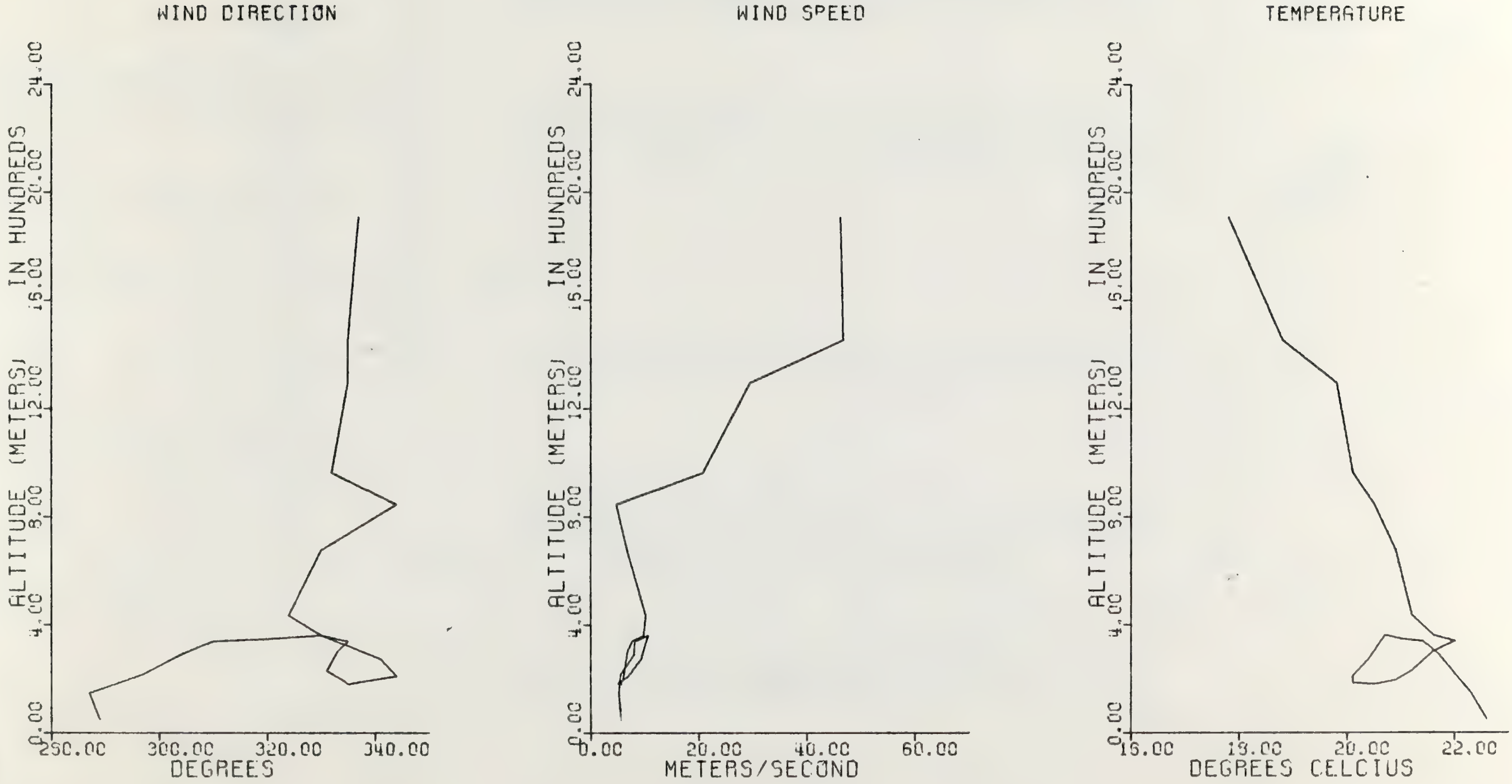

II B-1882



C-B PIBAL SOUNDING

TIME 1330 DATE 9/25/78

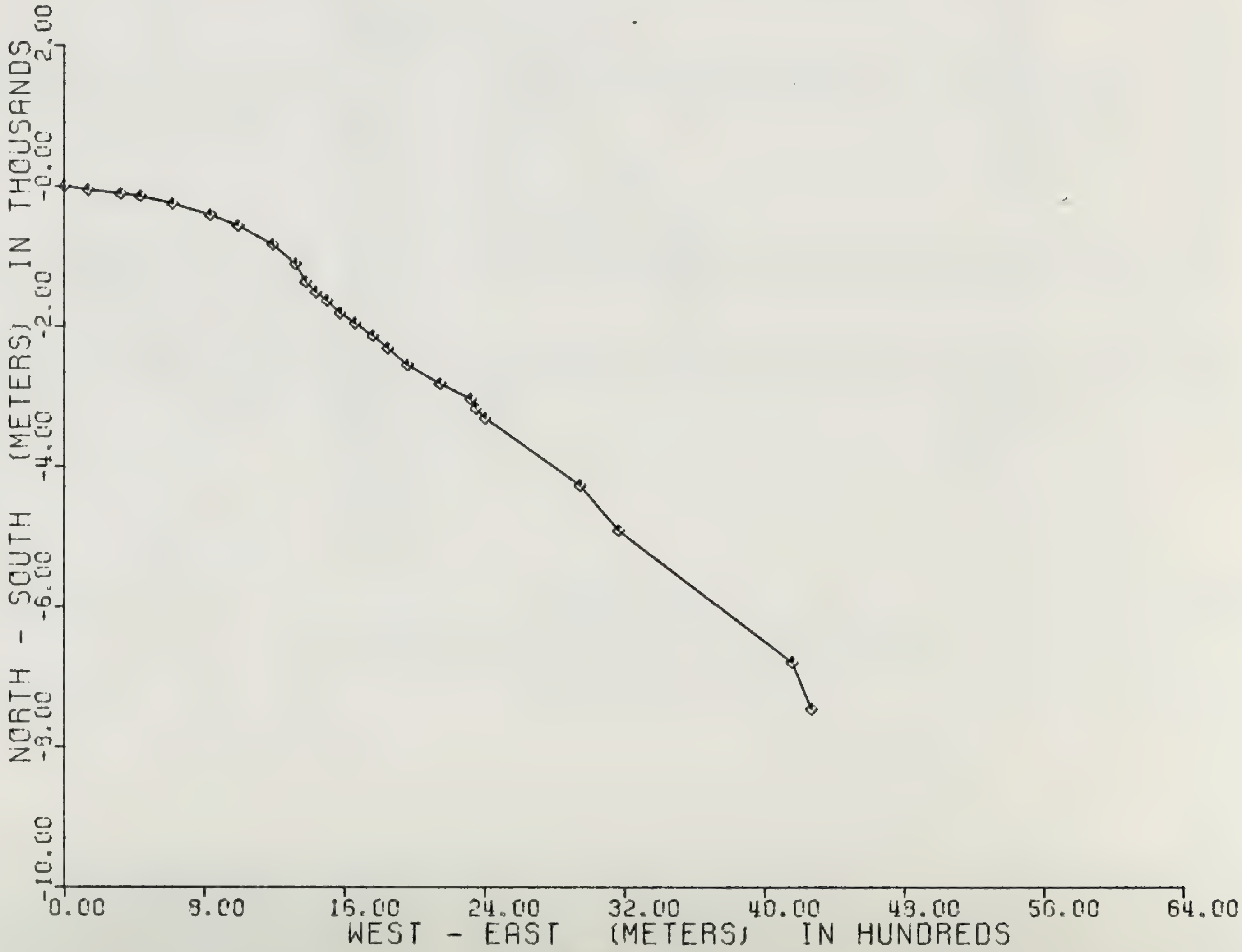
16 244.5 26.6

C-B PIBAL SOUNDING

TIME 1330 DATE 9/25/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-27-78

BALLOON RELEASED  715 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1                 THEODOLITE #2

  TIME      AZIMUTH  ELEVATION          AZIMUTH  ELEVATION  TEMP (DEG.C)
  0.0           0.0        0.0             42.5       -0.1      0.0
  0.5         288.3       48.4             40.2        2.5      5.2
  1.0         239.5       53.4             38.2        5.9      7.1
  1.5         293.8       55.7             37.2        7.9      8.4
  2.0         289.7       53.2             36.2       10.5      9.7
  2.5         307.2       60.6             34.3       14.2     10.0
  3.0         307.7       58.9             32.4       15.8     10.3
  3.5         307.4       56.8             29.8       17.8     10.6
  4.0         309.0       54.0             26.6       19.5     10.5
  4.5         312.2       52.5             24.6       21.2     10.1
  5.0         316.5       53.5             24.1       22.9      9.7
  5.5         320.5       54.9             23.6       24.5      9.2
  6.0         323.8       56.9             23.9       26.2      8.8
  6.5         330.8       59.6             25.6       27.3      8.4
  7.0         340.1       61.3             27.4       28.6      7.9
  7.5         349.2       62.3             28.9       29.2      7.5
  8.0         358.1       63.2             31.0       29.9      7.1
  8.5           9.8       64.2             33.2       30.8      6.7
  9.0          18.2       65.0             35.8       31.8      6.2
  9.5          25.5       66.2             38.2       33.1      5.7
 10.0          38.9       67.5             41.5       34.6      5.2
 10.5          42.9       67.9             42.6       35.1      4.7
 11.0          50.5       68.7             44.7       36.4      4.2
 11.5          59.3       69.7             47.3       37.9      3.7
 12.0          68.9       70.1             49.4       39.3      3.2



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME      RHO       ERROR

     1      12.5       4.4
     2      12.2       4.6
     3       6.3       4.8
     4      11.3       5.0
     5       1.2       5.5
     6      17.6       5.8
     7      38.4       6.1
     8      63.5       6.5
     9      34.0       6.9
    10      11.2       7.3
    11      24.9       7.7
    12      15.8       8.1
    13      11.7       8.4
    14      24.5       8.9
```

```
   16        244.5        26.6
   16         25.3         9.8
   17         35.0        10.3
   18         16.4        10.7
   19         61.0        11.1
   20          3.5        11.5
   21          1.7        11.6
   22         11.3        11.9
   23          2.1        12.2
   24         76.9        12.5


          HEIGHT  DIRECTION   SPEED  TEMP
           FEET    DEGREES   FT/SEC DEG C

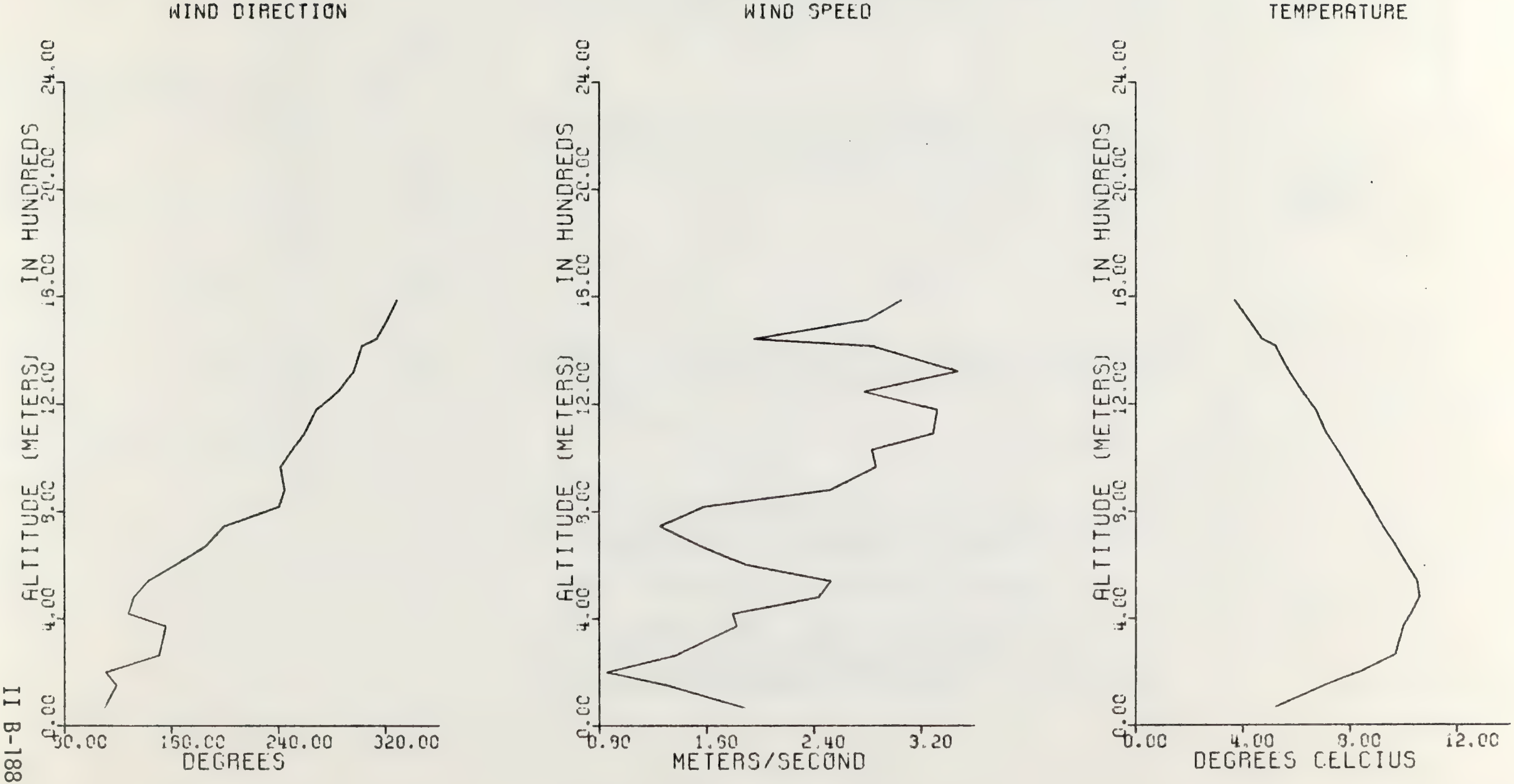
            222.     110.        6.2   5.2
            497.     119.        4.3   7.1
            660.     111.        2.8   8.4
            869.     151.        4.5   9.7
           1220.     156.        6.0  10.0
           1376.     128.        5.9  10.3
           1574.     132.        8.0  10.6
           1774.     143.        8.3  10.5
           1977.     164.        6.2  10.1
           2202.     186.        5.1   9.7
           2447.     200.        4.1   9.2
           2686.     241.        5.2   8.8
           2891.     245.        8.3   8.4
           3167.     242.        9.4   7.9
           3379.     251.        9.3   7.5
           3579.     260.       10.8   7.1
           3866.     269.       10.9   6.7
           4090.     285.        9.1   6.2
           4339.     297.       11.4   5.7
           4649.     303.        9.3   5.2
           4736.     314.        6.4   4.7
           4967.     322.        9.2   4.2
           5200.     329.       10.0   3.7


          HEIGHT  DIRECTION   SPEED  TEMP
          METERS   DEGREES    M/SEC  DEG C

             68.     110.        1.9   5.2
            151.     119.        1.3   7.1
            201.     111.        0.9   8.4
            265.     151.        1.4   9.7
            372.     156.        1.8  10.0
            419.     128.        1.8  10.3
            480.     132.        2.4  10.6
            541.     143.        2.5  10.5
            603.     164.        1.9  10.1
            671.     186.        1.6   9.7
            746.     200.        1.2   9.2
            819.     241.        1.6   8.8
            881.     245.        2.5   8.4
            965.     242.        2.9   7.9
           1030.     251.        2.8   7.5
           1091.     260.        3.3   7.1
           1178.     269.        3.3   6.7
           1247.     285.        2.8   6.2
           1322.     297.        3.5   5.7
           1417.     303.        2.8   5.2
           1444.     314.        2.0   4.7
           1514.     322.        2.8   4.2
           1585.     329.        3.0   3.7
```

C-B PIBAL SOUNDING

TIME 715 DATE 9/27/78



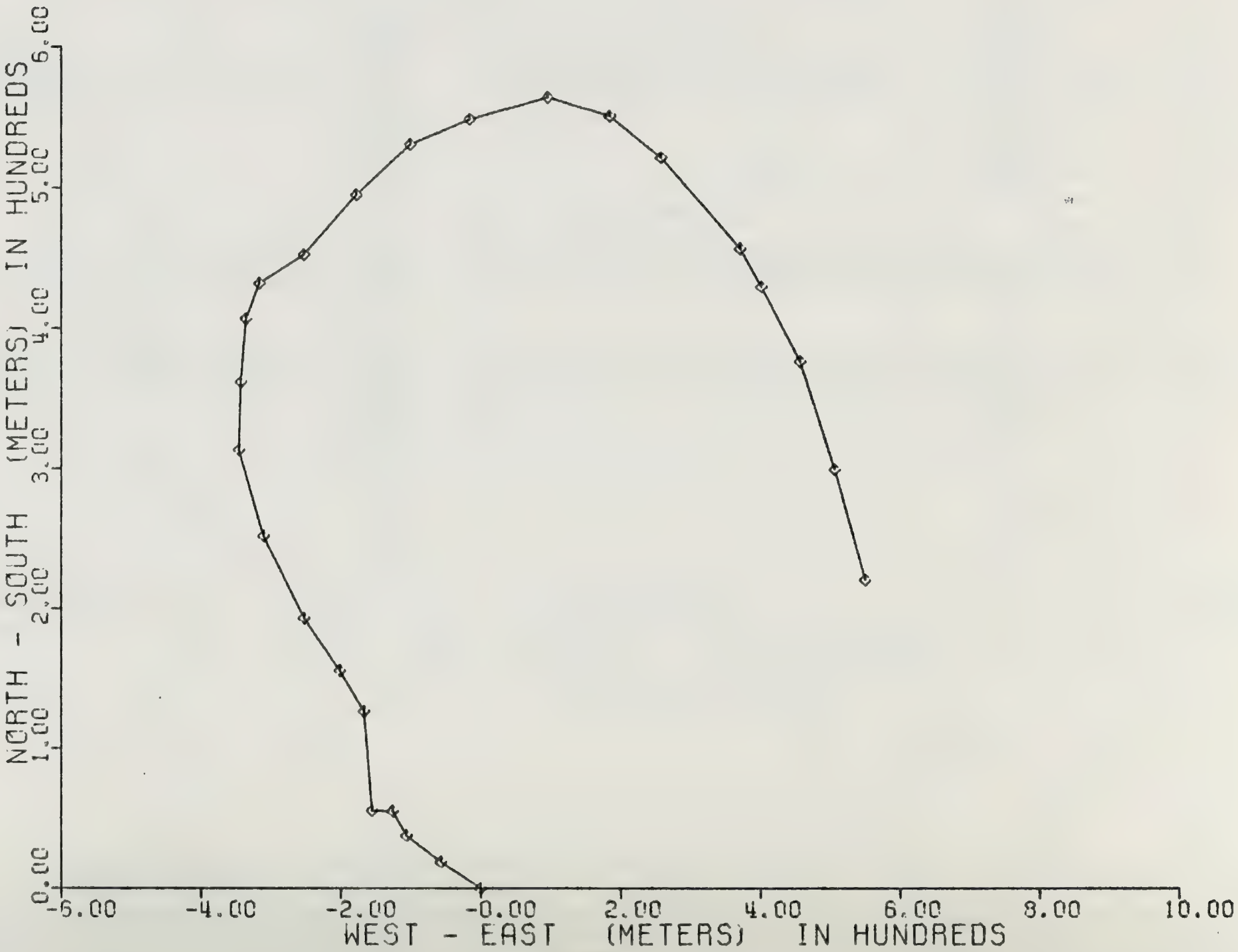
16 244.5 26.6

C-B PIBAL SOUNDING

TIME 715 DATE 9/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



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C-B PIBAL SOUNDING

SOUNDING DATE  9-27-78

BALLOON RELEASED 1315 MST


BASE LINE ANGLE            222.5
BASE LINE LENGTH (FT)     4804.2
TIME INTERVAL (SEC)         30.0
BASE LINE HEIGHT (FT)        8.0


                THEODOLITE #1               THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0          0.0        0.0            42.5       -0.1         0.0
   0.5        127.2       37.5            47.0        3.3        26.2
   1.0        135.6       43.6            50.6        7.9        26.8
   1.5        127.2       48.5            53.7       12.8        26.2
   2.0        121.1       51.0            57.2       18.4        25.7
   2.5        114.4       52.6            58.1       20.9        25.2
   3.0        105.7       50.8            59.1       21.9        24.7
   3.5        101.1       49.9            59.6       22.8        24.2
   4.0         96.6       50.3            59.5       24.4        23.7
   4.5         96.9       51.2            60.7       26.3        23.2
   5.0         98.6       52.5            61.8       28.2        22.7
   5.5        100.0       53.3            62.6       29.5        22.1
   6.0        100.6       53.9            63.4       30.8        21.5
   6.5        105.5       56.0            66.4       34.0        20.9
   7.0        109.2       59.5            67.8       35.7        20.3
   7.5        107.9       62.5            67.6       38.7        19.7
   8.0        104.9       64.7            65.0       42.0        19.1
   8.5         97.6       65.8            61.7       42.7        18.5
   9.0         91.0       66.7            59.4       43.3        17.9
   9.5         82.0       66.8            56.3       43.1        17.4
  10.0         73.3       65.7            53.9       42.3        16.9
  10.5         65.1       64.5            51.4       41.8        16.4
  11.0         57.1       62.9            49.4       41.1        15.9
  11.5         56.0       61.7            48.5       40.9        15.4
  12.0         53.2       60.2            47.3       40.6        14.9


COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME       RHO       ERROR

     1        4.4       4.7
     2       21.1       5.1
     3       27.4       5.8
     4       47.4       6.8
     5       42.9       7.4
     6       38.0       8.2
     7       45.5       8.8
     8       73.0       9.5
     9       64.5      10.1
    10       66.4      10.6
    11       72.6      10.8
    12       75.4      11.3
    13        5.5      12.0
    14      218.6      11.9
    15      264.6      12.7
  16        244.5        26.6
  16         30.5        13.5
  17         74.5        14.0
  18         90.4        14.6
  19        118.0        15.1
  20         96.5        15.7
  21         74.4        16.4
  22         63.8        17.3
  23         39.4        17.9
  24         70.1        18.8


            HEIGHT  DIRECTION  SPEED   TEMP
             FEET    DEGREES   FT/SEC DEG C

              291.    316.       11.5  26.2
              663.    308.       10.2  26.8
             1128.    288.       12.3  26.2
             1734.    275.       10.9  25.7
             2091.    253.       11.5  25.2
             2373.    250.       12.2  24.7
             2604.    245.       10.0  24.2
             2934.    256.        7.9  23.7
             3280.    294.        5.5  23.2
             3582.    317.        3.9  22.7
             3788.    307.        3.6  22.1
             4037.    328.        7.0  21.5
             4587.     15.        8.1  20.9
             4770.     65.        4.4  20.3
             5342.    181.        4.2  19.7
             5972.    181.        9.7  19.1
             6255.    184.       11.9  18.5
             6563.    185.       13.2  17.9
             6769.    190.       16.1  17.4
             6952.    194.       17.8  16.9
             7223.    193.       19.5  16.4
             7497.    200.       15.3  15.9
             7699.    210.       13.5  15.4


            HEIGHT  DIRECTION  SPEED   TEMP
            METERS   DEGREES   M/SEC   DEG C

               89.    316.        3.5  26.2
              202.    308.        3.1  26.8
              344.    288.        3.7  26.2
              529.    275.        3.3  25.7
              637.    253.        3.5  25.2
              723.    250.        3.7  24.7
              794.    245.        3.0  24.2
              894.    256.        2.4  23.7
             1000.    294.        1.7  23.2
             1092.    317.        1.2  22.7
             1155.    307.        1.1  22.1
             1231.    328.        2.1  21.5
             1398.     15.        2.5  20.9
             1454.     65.        1.3  20.3
             1628.    181.        1.3  19.7
             1820.    181.        3.0  19.1
             1907.    184.        3.6  18.5
             2000.    185.        4.0  17.9
             2063.    190.        4.9  17.4
             2119.    194.        5.4  16.9
             2202.    193.        5.9  16.4
             2285.    200.        4.7  15.9
             2347.    210.        4.1  15.4
```
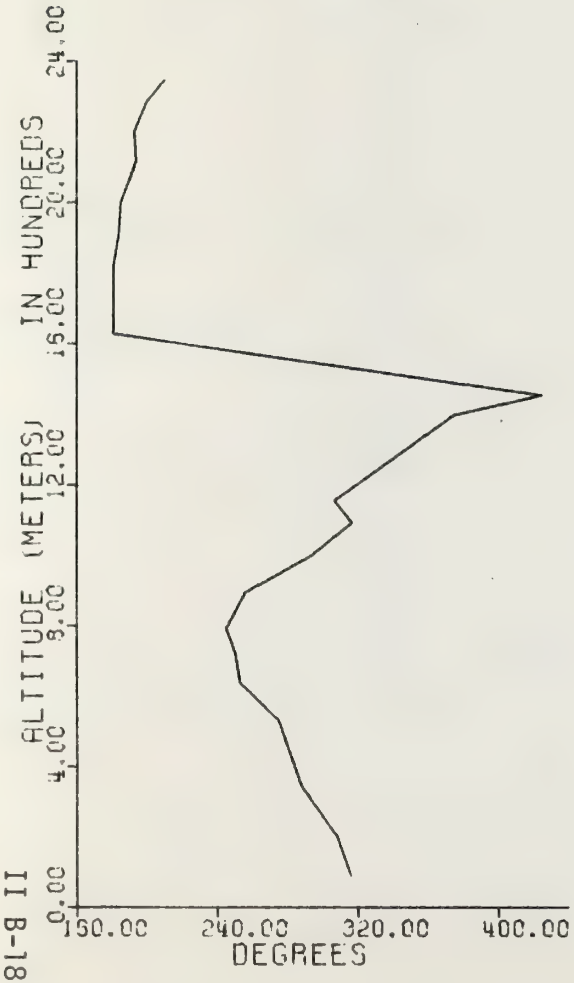
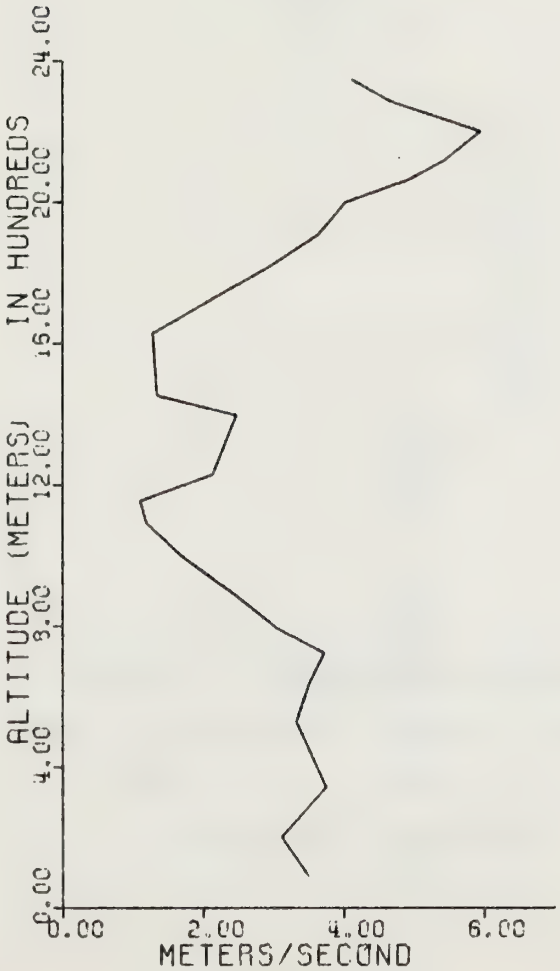

C-B PIBAL SOUNDING

TIME 1315   DATE 9/27/78

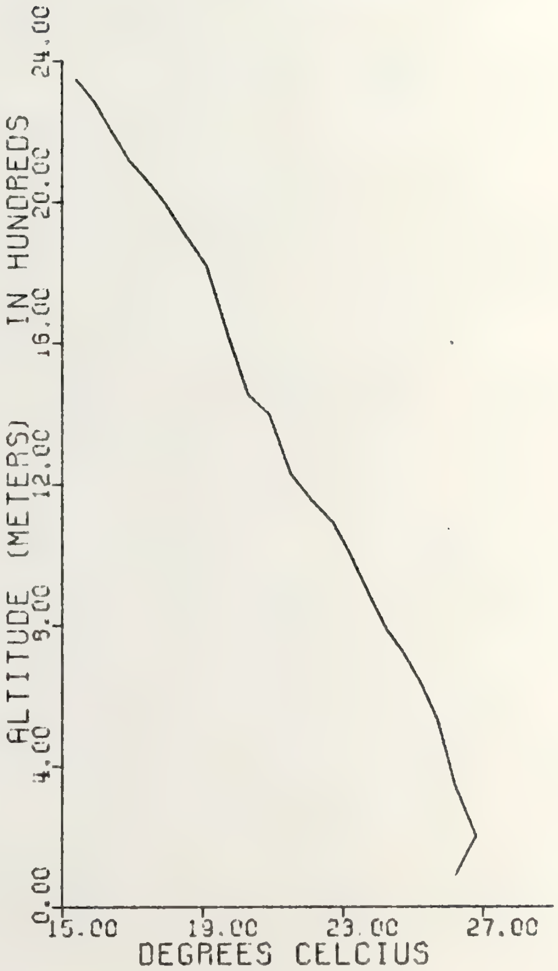
WIND DIRECTION



WIND SPEED



TEMPERATURE

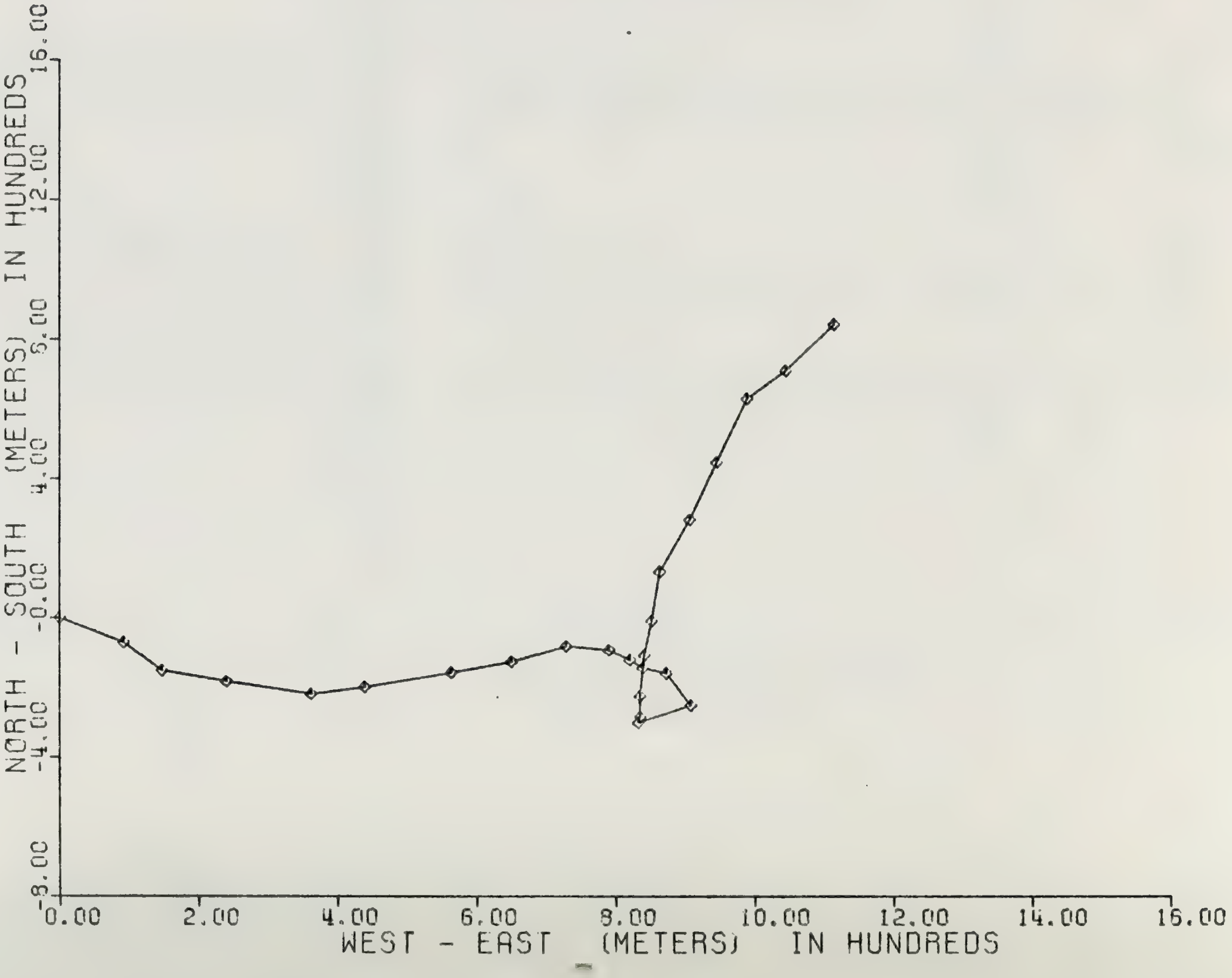


C-B PIBAL SOUNDING

TIME 1315   DATE 9/27/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



C-B PIBAL SOUNDING

TIME: AM DATE: 9/29/78

NO DATA RECEIVED.

```
        16        244.5         26.6

C-B PIBAL SOUNDING

SOUNDING DATE  9-29-78

BALLOON RELEASED 1315 MST


BASE LINE ANGLE              222.5
BASE LINE LENGTH (FT)       4804.2
TIME INTERVAL (SEC)           30.0
BASE LINE HEIGHT (FT)          8.0


                THEODOLITE #1                THEODOLITE #2

   TIME       AZIMUTH  ELEVATION         AZIMUTH  ELEVATION   TEMP (DEG.C)
   0.0            0.0        0.0            42.5       -0.1        0.0
   0.5          131.1       14.4            47.8        0.9        0.0
   1.0          127.1       19.2            52.4        3.6        0.0
   1.5          129.4       27.5            58.1        8.2        0.0
   2.0          130.1       32.0            63.8       13.1        0.0
   2.5          128.9       31.8            68.6       15.9        0.0
   3.0          124.0       31.3            71.4       16.9        0.0
   3.5          121.6       30.6            73.9       18.9        0.0
   4.0          120.1       29.6            75.6       18.1        0.0
   4.5          119.1       28.6            77.5       18.4        0.0
   5.0          118.1       27.3            79.4       18.1        0.0
   5.5          117.2       26.5            79.5       18.3        0.0
   6.0          115.8       25.7            80.5       18.7        0.0
   6.5          114.5       25.6            81.5       19.0        0.0
   7.0          113.9       25.3            82.6       19.4        0.0
   7.5          113.2       25.8            83.1       19.7        0.0
   8.0          113.0       28.5            83.8       20.3        0.0
   8.5          113.4       28.4            84.2       21.9        0.0
   9.0          113.4       27.6            85.6       22.3        0.0
   9.5          113.6       26.3            86.8       22.1        0.0
  10.0          113.0       25.0            87.0       21.2        0.0
  10.5          112.8       24.4            88.9       20.5        0.0
  11.0          112.3       23.6            89.2       20.2        0.0
  11.5          111.6       22.7            89.5       19.6        0.0
  12.0          111.3       22.0            89.8       19.2        0.0



COMPARISON OF REAL ERROR WITH 0.1 DEG. ERROR

  TIME        RHO        ERROR

     1        29.8         4.6
     2        20.5         5.1
     3        24.6         5.8
     4        31.3         6.7
     5        60.9         7.5
     6        41.1         8.5
     7       163.5         9.4
     8        60.3         9.9
     9        75.7        10.7
    10        52.4        11.4
    11       139.7        11.7
    12       215.5        12.4
    13       212.7        13.3
    14       251.1        14.0
    15       207.2        14.6
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16       75.2        15.0
17      180.4        15.4
18      282.7        16.3
19      378.7        17.0
20      391.7        17.3
21      260.0        18.8
22      313.1        19.4
23      321.2        20.1
24      343.8        20.6


         HEIGHT   DIRECTION   SPEED   TEMP
          FEET     DEGREES   FT/SEC  DEG C

           110.      308.      14.4    0.0
           304.      309.      15.6    0.0
           721.      313.      17.6    0.0
          1209.      309.      18.0    0.0
          1546.      293.      17.5    0.0
          1804.      285.      17.6    0.0
          2109.      287.      14.3    0.0
          2166.      288.      12.6    0.0
          2313.      290.      14.7    0.0
          2416.      285.      10.3    0.0
          2447.      278.      10.0    0.0
          2599.      280.      14.8    0.0
          2797.      283.      14.6    0.0
          2978.      283.      11.7    0.0
          3154.      282.       6.8    0.0
          3469.      298.       5.3    0.0
          3678.      296.      11.9    0.0
          3884.      295.      15.8    0.0
          3935.      289.      11.0    0.0
          3839.      288.      18.6    0.0
          4073.      288.      20.3    0.0
          4101.      279.      13.2    0.0
          4116.      280.      12.4    0.0


         HEIGHT   DIRECTION   SPEED   TEMP
         METERS    DEGREES    M/SEC  DEG C

            34.      308.       4.4    0.0
            93.      309.       4.8    0.0
           220.      313.       5.4    0.0
           369.      309.       5.5    0.0
           471.      293.       5.3    0.0
           550.      285.       5.4    0.0
           643.      287.       4.4    0.0
           660.      288.       3.8    0.0
           705.      290.       4.5    0.0
           736.      285.       3.1    0.0
           746.      278.       3.0    0.0
           792.      280.       4.5    0.0
           853.      283.       4.5    0.0
           908.      283.       3.6    0.0
           961.      282.       2.1    0.0
          1057.      298.       1.6    0.0
          1121.      296.       3.6    0.0
          1184.      295.       4.8    0.0
          1199.      289.       3.4    0.0
          1170.      288.       5.7    0.0
          1241.      288.       6.2    0.0
          1250.      279.       4.0    0.0
          1255.      280.       3.8    0.0
```
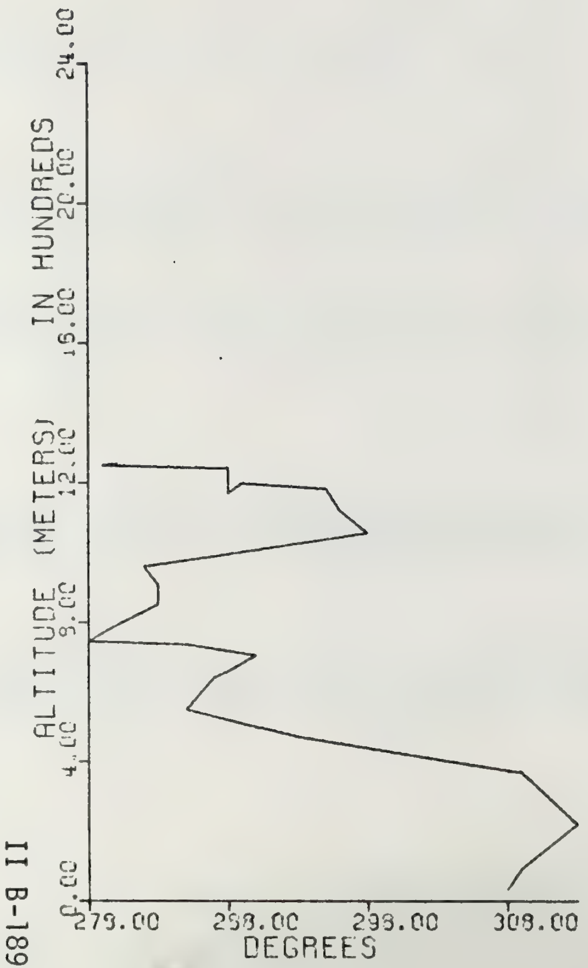
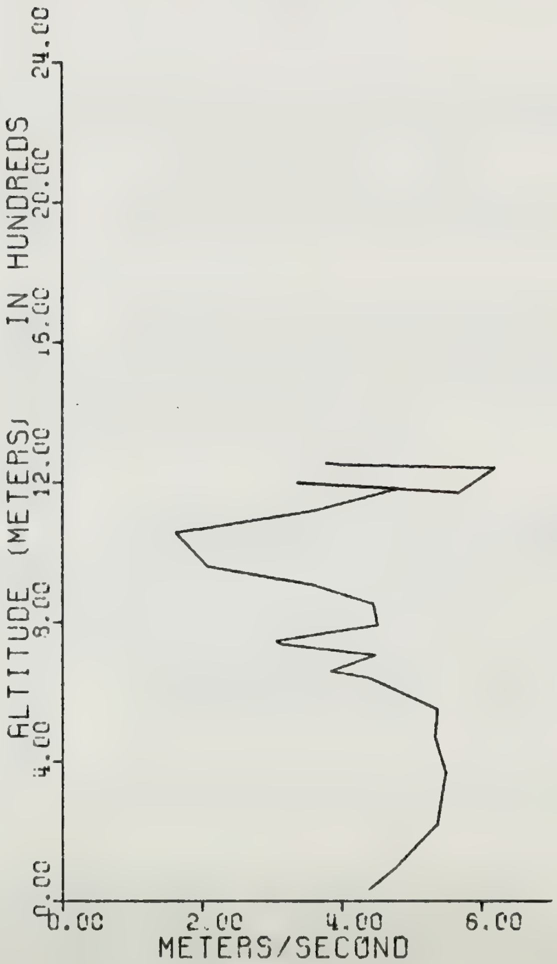

C-B PIBAL SOUNDING

TIME 1315   DATE 9/29/78

WIND DIRECTION



WIND SPEED



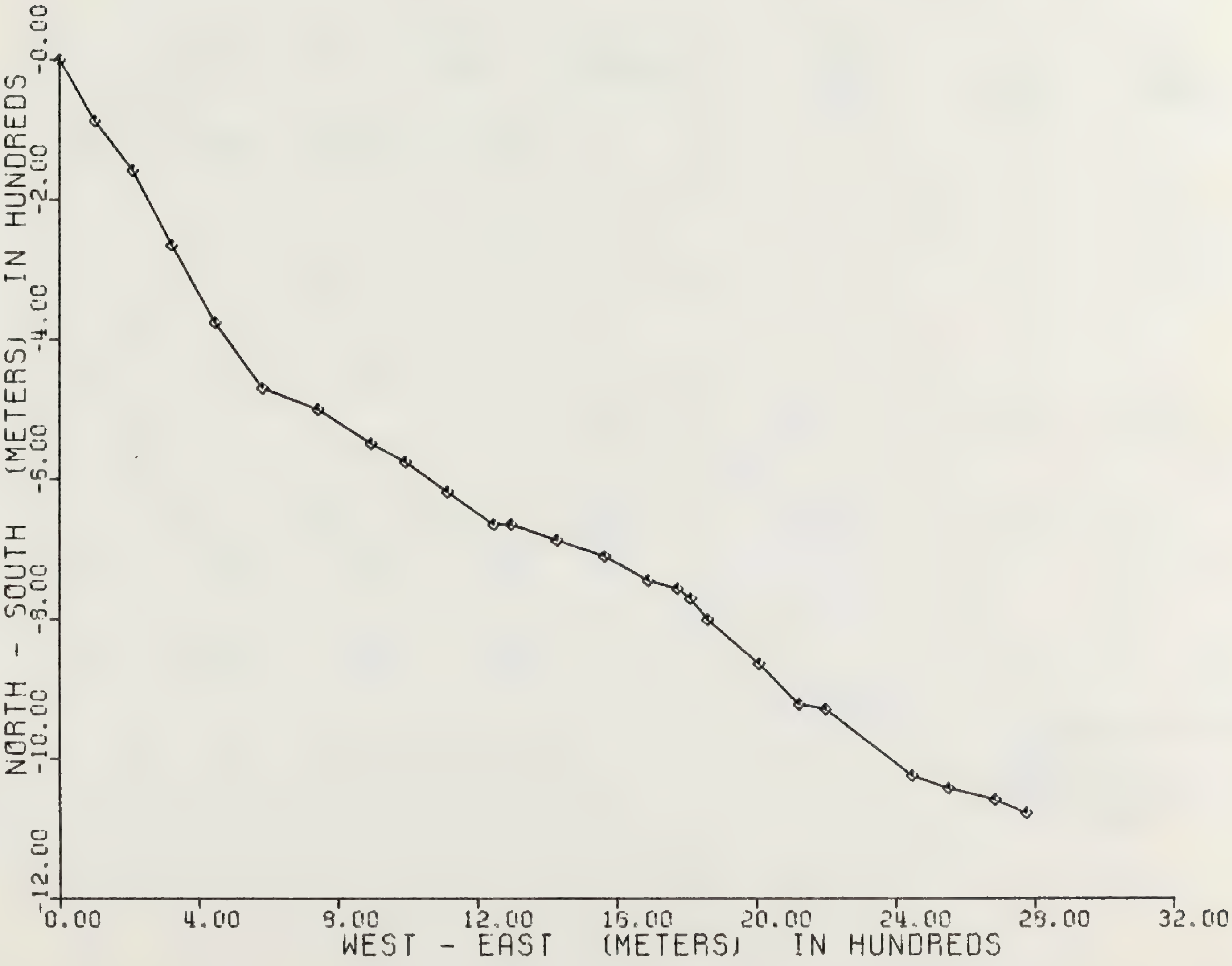
TEMPERATURE

C-B PIBAL SOUNDING

TIME 1315 DATE 9/29/78

PIBAL TRAJECTORY - LAUNCH AT ORIGIN

SYMBOL AT 30-SECOND INTERVAL



EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3
MULTIPOINT RECORDER	98	98	98	96
DATA ACQUISITION SYSTEM	0	0	0	0
OTHER SYSTEMS				
MONTHLY TOTAL	98	98	98	96

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 20
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	WS	WD	TEMP	MIXING HT	INVERS. HT	STB 50m	STB 200m	PART	PRECIP.
MULTIPOINT RECORDER	83	97	93						
DATA ACQUISITION SYSTEM	0	0	0						
OTHER SYSTEMS				100	100	100	100	100	100
MONTHLY TOTAL	83	97	93	100	100	100	100	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	NO	NO_x	NO_2	O_3	SO_2	H_2S	THC	CH_4	NMHC
MULTIPOINT RECORDER	91	79	91	93	91	91	2	2	2
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	91	79	91	93	91	91	2	2	2

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
Sept 1978
OCCIDENTAL OIL SHALE, INC

	CO	BAR. PRES.	SOLAR RAD.	WS 10m	WS 30m	WS 60m	WD 10m	WD 30m	WD 60m
MULTIPOINT RECORDER	58	96	96	93	99	99	99	99	99
DATA ACQUISITION SYSTEM	0	0	0	0	0	0	0	0	0
OTHER SYSTEMS									
MONTHLY TOTALS	58	96	96	93	99	99	99	99	99

EFFICIENCY REPORT
PERCENT

C-b TRACT
TRAILER 23
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	Hor. WD 60m	TMP 10m	TMP 30m	TMP 60m	DT 60-10m	RH	PART	PREC
MULTIPOINT RECORDER	0	99	12	0	99			
DATA ACQUISITION SYSTEM	0	0	0	0	0			
OTHER SYSTEMS						100	100	100
MONTHLY TOTALS	0	99	12	0	99	100	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 042
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	100	99	100	100
MONTHLY TOTAL	100	99	100	100

EFFICIENCY REPORT
PERCENT

C-b TRACT
SITE 056
Sept 1978
OCCIDENTAL OIL SHALE, INC.

	WS 10m	WD 10m	TMP 10m	PART
MULTIPOINT RECORDER				
DATA ACQUISITION SYSTEM				
OTHER SYSTEMS	59	58	59	100
MONTHLY TOTALS	59	58	59	100

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 20
Sept 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	9	00	24.2	Ug/m^3
		2	27	00	23.4	Ug/m^3
		3	3	00	20.8	Ug/m^3
		4	30	00	20.7	Ug/m^3
		5	6	00	15.1	Ug/m^3
Ozone	1-hr	1	18	8	90.0	Ug/m^3
		2	16	13	86.0	Ug/m^3
		3	16	12	84.0	Ug/m^3
		4	16	14	78.0	Ug/m^3
		5	17	11	75.0	Ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
Sept 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	27	00	23.3	Ug/m^3
		2	15	00	20.6	Ug/m^3
		3	9	00	16.8	Ug/m^3
		4	24	00	16.8	Ug/m^3
		5	3	00	16.6	Ug/m^3
Carbon Monoxide	1-hr	1	29	15	500.0	Ug/m^3
		2	26	14	300.0	Ug/m^3
		3	26	15	300.0	Ug/m^3
		4	26	16	300.0	Ug/m^3
		5	26	17	300.0	Ug/m^3
	8-hr	1	29	13	290.0	Ug/m^3
		2	26	12	290.0	Ug/m^3
		3	27	13	150.0	Ug/m^3
		4	21	11	110.0	Ug/m^3
		5	25	12	100.0	Ug/m^3

06

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
TRAILER 23
Sept 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Sulfur Dioxide	3-hr	1	21	22	17.0	Ug/m^3
		2	-	-	0.0	Ug/m^3
		3	-	-	0.0	Ug/m^3
		4	-	-	0.0	Ug/m^3
		5	-	-	0.0	Ug/m^3
	24-hr	1	21	1	2.0	Ug/m^3
		2	-	-	0.0	Ug/m^3
		3	-	-	0.0	Ug/m^3
		4	-	-	0.0	Ug/m^3
		5	-	-	0.0	Ug/m^3
Ozone	1-hr	1	8	15	153.0	Ug/m^3
		2	8	18	149.0	Ug/m^3
		3	8	11	147.0	Ug/m^3
		4	8	14	147.0	Ug/m^3
		5	8	17	147.0	Ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 42
Sept 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	15	00	24.5	Ug/m^3
		2	3	00	17.4	Ug/m^3
		3	6	00	16.6	Ug/m^3
		4	27	00	16.6	Ug/m^3
		5	9	00	16.1	Ug/m^3

FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE

C-b TRACT
SITE 56
Sept 1978
OCCIDENTAL OIL SHALE, INC.

COMPONENT	AVE TIME	RANK	DAY	HOUR (BEG) LST	VALUE	UNITS
Particulate	24-hr	1	15	00	40.6	Ug/m^3
		2	24	00	18.6	Ug/m^3
		3	3	00	18.4	Ug/m^3
		4	9	00	17.4	Ug/m^3
		5	6	00	16.2	Ug/m^3

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DATA CORRECTIONS

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TOTAL HYDROCARBONS

MICROGRAMS/CUBIC METER
                                                   C-B OIL SHALE PROJECT, COLORADO      **********************
                                                                                        *                    *
                                                   SITE   23                            *     FINAL DATA     *
                                                                                        *  AS OF 17/JUL/78   *
                                                   SEP, 1977                            *                    *
                                                                                        **********************
                                                   AEROVIRONMENT INC.



                                  CLOCK HOUR  [LOCAL STANDARD TIME]

DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23    AVE PEAK

  1 [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
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AQOUT    [15 MAY 78]
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HYDROCARBONS (CORRECTED FOR CH4)

MICROGRAMS/CUBIC METER

C-B OIL SHALE PROJECT, COLORADO

SITE 23

SEP, 1977

AEROVIRONMENT INC.

****
*   FINAL DATA   *
* AS OF 17/JUL/78   *
****

CLOCK HOUR (LOCAL STANDARD TIME)

DAY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE	PEAK
1	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
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19	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
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22	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
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27	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
28	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
29	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
30	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
31	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
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SD	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

AQOUT (15 MAY 78)

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METHANE

MICROGRAMS/CUBIC METER
                                                C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                    *                   *
                                                SITE   23                           *     FINAL DATA    *
                                                                                    *  AS OF 17/JUL/78  *
                                                SEP, 1977                           *                   *
                                                                                    *********************
                                                AEROVIRONMENT INC.


                                  CLOCK HOUR  [LOCAL STANDARD TIME]


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23    AVE PEAK

  1  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
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AQOUT    [15 MAY 78]
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CARBON MONOXIDE

MILLIGRAMS PER CUBIC METER

                                                         C-B OIL SHALE PROJECT, COLORADO      **********************
                                                                                              *                    *
                                                         SITE   23                            *     FINAL DATA     *
                                                                                              *   AS OF 17/JUL/78  *
                                                         SEP, 1977                            *                    *
                                                                                              **********************
                                                         AEROVIRONMENT INC.


                                          CLOCK HOUR  (LOCAL STANDARD TIME)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23    AVE PEAK

  1 [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
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AOOUT    (15 MAY 78)
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FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE                                             PAGE:   1

                                                C-B OIL SHALE PROJECT, COLORADO      *********************
                                                                                     *                   *
                                                SITE   23                            *    FINAL DATA     *
                                                                                     *  AS OF 19/JUL/78  *
                                                SEP, 1977                            *                   *
                                                                                     *********************
                                                AEROVIRONMENT INC.


COMPONENT                        AVE TIME  RANK  DAY  HOUR(BEG)  VALUE     UNITS      WIND SPEED  UNITS  WIND DIRECTION  UNITS
                                                         LST                              10M                  10M

CARBON MONOXIDE
                                  01 HR     1     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            2     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            3     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            4     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            5     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                  08 HR     1     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            2     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            3     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            4     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
                                            5     0      23      [IM]   MGM/ M**3       [ ]       M/S         [ ]         DEG
PARTICULATES (24 HR, AVG)
                                  24 HR     1    28      00      23.4   UGM/ M**3      [IM]       M/S        [IM]         DEG
                                            2    16      00      23.0   UGM/ M**3        6        M/S         190         DEG
                                            3    10      00      22.4   UGM/ M**3        3        M/S         190         DEG
                                            4     2      00      17.0   UGM/ M**3        3        M/S         200         DEG
                                            5     7      00      16.6   UGM/ M**3        2        M/S         180         DEG
HYDROCARBONS (CORRECTED FOR CH4)
                                  03 HR     1     0      23      [IM]   UGM/ M**3       [ ]       M/S         [ ]         DEG
                                            2     0      23      [IM]   UGM/ M**3       [ ]       M/S         [ ]         DEG
                                            3     0      23      [IM]   UGM/ M**3       [ ]       M/S         [ ]         DEG
                                            4     0      23      [IM]   UGM/ M**3       [ ]       M/S         [ ]         DEG
                                            5     0      23      [IM]   UGM/ M**3       [ ]       M/S         [ ]         DEG


 AQISA  [22 APR 78]
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DOWNTIME HOURS AND PERCENT EFFICIENCY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

SEP, 1977

AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
**********************
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DAY	PART	RH1	SOLR	SO2	STH2	STH3	STH4	TEM2	TEM3	TEM4	THC	WD2	WD3	WD4	WS2	WS3	WS4
1	0	0	0	0	0	0	0	0	12	12	24	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
11	0	17	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
12	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
13	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
14	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
15	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
16	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
17	0	24	0	2	0	0	0	0	24	24	24	0	0	0	0	0	0
18	0	24	0	20	0	0	0	0	24	24	24	1	2	0	0	0	0
19	0	24	2	9	2	3	2	2	24	24	24	2	2	3	0	0	0
20	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
21	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
22	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
23	0	24	6	6	6	6	6	6	24	24	24	6	6	6	6	6	6
24	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
25	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
26	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
27	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
28	0	24	7	12	7	7	7	7	24	24	24	7	7	7	5	5	4
29	0	24	0	0	0	0	0	1	24	24	24	0	0	0	0	0	0
30	0	24	0	0	1	1	1	0	24	24	24	1	1	1	0	0	0
31	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
TT	0	473	15	49	16	17	16	16	708	708	720	17	18	17	11	11	10
%EFF	100	33	97	93	97	97	97	97	0	0	0	97	97	97	98	98	98

AQDTR (05 APR 78)

DOWNTIME HOURS AND PERCENT EFFICIENCY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

SEP, 1977

AEROVIRONMENT INC.

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**********************
*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
**********************
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DAY	BARP	BHD1	BHD3	BSP1	BSP3	BST1	BST3	BVD1	BVD3	BWS1	BWS3	CH4	CO	DT2	H2S	NO	NOX	O3
1	12	12	12	12	0	12	12	12	12	0	0	24	24	0	0	0	0	0
2	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
3	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
4	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
5	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
6	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
7	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
8	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
9	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
10	24	24	24	24	0	24	24	24	24	0	0	24	24	0	0	0	0	0
11	24	24	24	24	0	24	24	24	24	0	0	24	24	21	0	0	0	0
12	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
13	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
14	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
15	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
16	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
17	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
18	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
19	24	24	24	24	0	24	24	24	24	2	2	24	24	24	0	0	0	0
20	24	24	24	24	0	24	24	24	24	0	0	24	24	24	4	0	0	0
21	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
22	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
23	24	24	24	24	6	24	24	24	24	6	6	24	24	24	6	6	6	6
24	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
25	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
26	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
27	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
28	24	24	24	24	7	24	24	24	24	7	7	24	24	24	5	6	5	6
29	24	24	24	24	0	24	24	24	24	0	0	24	24	24	0	0	0	0
30	24	24	24	24	1	24	24	24	24	0	0	24	24	24	0	0	0	0
31	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
TT	708	708	708	708	14	708	708	708	708	15	15	720	720	477	15	12	11	12
%EFF	0	0	0	0	98	0	0	0	0	97	97	0	0	32	97	98	98	98

AQDTR (05 APR 78)

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DAILY AVERAGES SUMMARY REPORT

                                              C-B OIL SHALE PROJECT, COLORADO        **********************
                                                                                     *                    *
                                              SITE   23                              *     FINAL DATA     *
                                                                                     *  AS OF 17/JUL/78   *
                                              SEP, 1977                              *                    *
                                                                                     **********************
                                              AEROVIRONMENT INC.


                        DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                       (75% FOR TEMP AND REL HUMIDITY)

                 DAY    BST1      BST3      BSP1      BSP3      STH2      STH3      STH4
                       DEG       DEG       DEG       DEG       DEG       DEG       DEG
                           10M       60M       10M       60M       10M       30M       60M


                   1       *         *         *         5        11         8         6
                   2       *         *         *         4        12        11        11
                   3       *         *         *         5         9         7        11
                   4       *         *         *         3        12         8        12
                   5       *         *         *         2        12         8        10
                   6       *         *         *         3        11         8        10
                   7       *         *         *         3        11         7        10
                   8       *         *         *         4        10         8         8
                   9       *         *         *         4        10         8         8
                  10       *         *         *         4        11        10        10
                  11       *         *         *         4         7         5         6
                  12       *         *         *         4        10         6        10
                  13       *         *         *         3        13         9        10
                  14       *         *         *         4        10         7        10
                  15       *         *         *         5         9         8         7
                  16       *         *         *         5         7         6         6
                  17       *         *         *         5         7         7         6
                  18       *         *         *         5        13        10        13
                  19       *         *         *         4         8         6         7
                  20       *         *         *         5         9         6         7
                  21       *         *         *         5        13         9        10
                  22       *         *         *         4        10         7         7
                  23       *         *         *         4        12         8        10
                  24       *         *         *         3        10         9         9
                  25       *         *         *         3         8         7         6
                  26       *         *         *         5         8         7         8
                  27       *         *         *         4        10         7         8
                  28       *         *         *         3        11        10        15
                  29       *         *         *         4         9         8         8
                  30       *         *         *         3         7         6         5
                  31    (  )      (  )      (  )      (  )      (  )      (  )      (  )

                  AV       *         *         *         4        10         8         9

         * INDICATES NOT ENOUGH DATA FOR AVERAGE
AQMAR    (04 MAY 78)
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DAILY AVERAGES SUMMARY REPORT

                                                   C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                       *                   *
                                                   SITE   23                           *     FINAL DATA    *
                                                                                       *  AS OF 17/JUL/78  *
                                                   SEP, 1977                           *                   *
                                                                                       *********************
                                                   AEROVIRONMENT INC.


                         DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                        (75% FOR TEMP AND REL HUMIDITY)

                DAY   TEM2     TEM3     TEM4     RH1      BARP     SOLR     DT2
                      DEGC     DEGC     DEGC     PER     MM  HG    LY       DEGC
                       10M      30M      60M      1M       0M       0M    60-10M


                  1      *        *        *        *        *       26       .6
                  2     27        *        *       29        *       24       .6
                  3     23        *        *       55        *       11       .4
                  4     24        *        *       47        *       23       .3
                  5     26        *        *       34        *       23       .6
                  6     27        *        *       28        *       23       .6
                  7     28        *        *       27        *       19      1.1
                  8     28        *        *       23        *       16       .4
                  9     24        *        *       24        *       18       .2
                 10     26        *        *       30        *       21       .0
                 11     20        *        *        *        *        7        *
                 12     13        *        *        *        *       15        *
                 13      7        *        *        *        *       22        *
                 14      8        *        *        *        *       17        *
                 15      8        *        *        *        *       18        *
                 16      9        *        *        *        *       20        *
                 17      7        *        *        *        *       19        *
                 18     10        *        *        *        *       20        *
                 19     10        *        *        *        *       11        *
                 20     11        *        *        *        *       17        *
                 21      5        *        *        *        *       15        *
                 22      7        *        *        *        *       18        *
                 23      3        *        *        *        *       11        *
                 24      7        *        *        *        *       18        *
                 25     15        *        *        *        *       21        *
                 26     12        *        *        *        *       13        *
                 27      9        *        *        *        *       18        *
                 28      *        *        *        *        *        7        *
                 29     11        *        *        *        *       14        *
                 30      3        *        *        *        *        9        *
                 31   [  ]     [  ]     [  ]     [  ]     [  ]     [  ]     [  ]

                 AV     15        *        *        *        *       17        *


     * INDICATES NOT ENOUGH DATA FOR AVERAGE
AQMAR   (04 MAY 78)
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DAILY AVERAGES SUMMARY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

SEP, 1977

AEROVIRONMENT INC.

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**********************
*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
**********************
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DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	WS2 M/S 10M	WD2 DEG 10M	WS3 M/S 30M	WD3 DEG 30M	WS4 M/S 60M	WD4 DEG 60M	BWS1 M/S 10M	BHD1 DEG 10M	BVD1 DEG 10M	BWS3 M/S 60M	BHD3 DEG 60M	BVD3 DEG 60M
1	4	225	5	205	5	220	0	*	*	*	*	*
2	3	200	3	190	3	205	1	*	*	6	*	*
3	2	155	3	150	2	170	0	*	*	5	*	*
4	2	180	2	175	1	190	1	*	*	1	*	*
5	2	195	2	155	2	180	3	*	*	0	*	*
6	2	165	2	175	2	180	1	*	*	1	*	*
7	2	180	3	185	3	185	0	*	*	1	*	*
8	4	250	5	250	6	250	0	*	*	1	*	*
9	2	220	2	240	2	255	0	*	*	2	*	*
10	3	190	4	180	4	195	0	*	*	1	*	*
11	3	170	3	155	4	170	0	*	*	1	*	*
12	2	160	3	155	3	170	0	*	*	1	*	*
13	1	180	1	190	1	185	1	*	*	1	*	*
14	3	170	3	165	3	175	0	*	*	1	*	*
15	3	195	4	185	4	195	0	*	*	0	*	*
16	6	190	7	180	7	190	0	*	*	0	*	*
17	5	215	6	210	6	225	0	*	*	0	*	*
18	2	215	2	205	2	235	1	*	*	1	*	*
19	4	175	4	175	5	190	1	*	*	1	*	*
20	4	210	5	205	6	215	0	*	*	1	*	*
21	3	215	3	210	3	215	0	*	*	2	*	*
22	5	210	6	200	7	215	1	*	*	1	*	*
23	3	215	4	220	4	235	4	*	*	0	*	*
24	4	190	5	190	6	205	4	*	*	0	*	*
25	4	205	5	200	6	205	3	*	*	0	*	*
26	5	200	6	195	7	210	2	*	*	1	*	*
27	3	200	4	195	5	215	1	*	*	1	*	*
28	3	160	4	165	4	185	1	*	*	1	*	*
29	5	195	6	185	7	200	2	*	*	1	*	*
30	3	210	4	215	4	205	2	*	*	0	*	*
31	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
AV	3	195	4	190	- 4	205	1	*	*	1	*	*

* INDICATES NOT ENOUGH DATA FOR AVERAGE

AQMAR (04 MAY 78)

DAILY AVERAGES SUMMARY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

SEP, 1977

AEROVIRONMENT INC.

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**********************
*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
**********************
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DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	NOX UGM/M**3	NO2 UGM/M**3	NO UGM/M**3	SO2 UGM/M**3	H2S UGM/M**3	O3 UGM/M**3	THC UGM/M**3	HC UGM/M**3	CH4 UGM/M**3	CO MGM/M**3
1	*	*	*	0	0	100	*	*	*	*
2	0	0	5	0	0	100	*	*	*	*
3	0	0	0	0	0	90	*	*	*	*
4	0	0	0	0	0	95	*	*	*	*
5	0	0	0	0	0	80	*	*	*	*
6	0	0	0	0	0	70	*	*	*	*
7	0	0	0	0	0	75	*	*	*	*
8	0	0	0	0	0	80	*	*	*	*
9	0	0	0	0	0	70	*	*	*	*
10	0	0	0	0	0	75	*	*	*	*
11	0	0	0	0	0	55	*	*	*	*
12	5	5	0	0	0	60	*	*	*	*
13	0	0	0	0	0	60	*	*	*	*
14	0	0	0	0	0	60	*	*	*	*
15	0	0	0	0	0	55	*	*	*	*
16	0	0	0	0	0	60	*	*	*	*
17	0	0	0	0	0	65	*	*	*	*
18	0	0	0	*	0	60	*	*	*	*
19	0	0	0	0	0	65	*	*	*	*
20	0	0	0	0	10	60	*	*	*	*
21	0	0	0	0	0	65	*	*	*	*
22	0	0	0	0	0	70	*	*	*	*
23	0	0	0	0	15	65	*	*	*	*
24	5	0	5	0	0	75	*	*	*	*
25	0	0	0	0	0	70	*	*	*	*
26	0	0	0	0	0	55	*	*	*	*
27	*	*	*	0	0	50	*	*	*	*
28	*	*	*	0	5	40	*	*	*	*
29	0	0	0	0	0	50	*	*	*	*
30	0	0	0	0	0	60	*	*	*	*
31	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
AV	0	0	0	0	0	70	*	*	*	*

* INDICATES NOT ENOUGH DATA FOR AVERAGE

AQMAR (04 MAY 78)

TOTAL HYDROCARBONS

MICROGRAMS/CUBIC METER

C-B OIL SHALE PROJECT, COLORADO

SITE 23

OCT, 1977

AEROVIRONMENT INC.

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*********************
*                   *
*     FINAL DATA    *
*  AS OF 17/JUL/78  *
*                   *
*********************
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CLOCK HOUR (LOCAL STANDARD TIME)

DAY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE	PEAK
1	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
2	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
3	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
4	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
5	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
6	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
7	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
8	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
9	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
10	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
11	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
12	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
13	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
14	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
15	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
16	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
17	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
18	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
19	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
20	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
21	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
22	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
23	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
24	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
25	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
26	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
27	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
28	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
29	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
30	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
31	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[IM]	[ ]	[ ]
AV	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
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AQOUT (15 MAY 78)

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HYDROCARBONS (CORRECTED FOR CH4)
MICROGRAMS/CUBIC METER
                                                  C-B OIL SHALE PROJECT, COLORADO      ********************
                                                                                       *                  *
                                                  SITE   23                            *    FINAL DATA    *
                                                                                       *  AS OF 17/JUL/78 *
                                                  OCT, 1977                            *                  *
                                                                                       ********************
                                                  AEROVIRONMENT INC.


                                     CLOCK HOUR  (LOCAL STANDARD TIME)

DAY    00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23     AVE PEAK

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AQOUT    (15 MAY 78)
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METHANE

MICROGRAMS/CUBIC METER
                                                                      C-B OIL SHALE PROJECT, COLORADO      ***********************
                                                                                                           *                     *
                                                                      SITE   23                            *     FINAL DATA      *
                                                                                                           *   AS OF 17/JUL/78   *
                                                                      OCT, 1977                            *                     *
                                                                                                           ***********************
                                                                      AEROVIRONMENT INC.



                                               CLOCK HOUR  (LOCAL STANDARD TIME)

DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23    AVE PEAK

  1  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  2  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  3  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  4  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  5  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  6  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  7  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  8  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
  9  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 10  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 11  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 12  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 13  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 14  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 15  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
 16  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
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 18  [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM] [IM]  [  ] [  ]
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AQOUT    (15 MAY 78)
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CARBON MONOXIDE

MILLIGRAMS PER CUBIC METER

C-B OIL SHALE PROJECT, COLORADO

SITE 23

OCT, 1977

AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
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CLOCK HOUR (LOCAL STANDARD TIME)

DAY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
10	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
18	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
19	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
20	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
21	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
22	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
23	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
24	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
25	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
26	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
27	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
28	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
29	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
30	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
31	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
AV	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
SD	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )

AQOUT (15 MAY 78)

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     FIVE MAXIMUM INDEPENDENT SLIDING AVERAGE                                                PAGE:  1

                                                   C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                       *                   *
                                                   SITE   23                           *     FINAL DATA    *
                                                                                       *  AS OF 19/JUL/78  *
                                                   OCT, 1977                           *                   *
                                                                                       *********************
                                                   AEROVIRONMENT INC.


COMPONENT                    AVE TIME  RANK  DAY  HOUR(BEG)  VALUE    UNITS      WIND SPEED  UNITS  WIND DIRECTION  UNITS
                                                     LST                            10M                 10M

CARBON MONOXIDE
                              01 HR     1     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        2     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        3     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        4     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        5     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                              08 HR     1     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        2     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        3     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        4     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
                                        5     0      23      [IM]  MGM/ M**3      [  ]      M/S        [  ]        DEG
PARTICULATES (24 HR. AVG)
                              24 HR     1     4      00      21.0  UGM/ M**3      [IM]      M/S        [IM]        DEG
                                        2    16      00      19.0  UGM/ M**3         2      M/S         200        DEG
                                        3    19      00      16.8  UGM/ M**3         2      M/S         170        DEG
                                        4     8      00      12.8  UGM/ M**3         2      M/S         165        DEG
                                        5    28      00      12.7  UGM/ M**3         3      M/S         160        DEG
HYDROCARBONS (CORRECTED FOR CH4)
                              03 HR     1     0      23      [IM]  UGM/ M**3      [  ]      M/S        [  ]        DEG
                                        2     0      23      [IM]  UGM/ M**3      [  ]      M/S        [  ]        DEG
                                        3     0      23      [IM]  UGM/ M**3      [  ]      M/S        [  ]        DEG
                                        4     0      23      [IM]  UGM/ M**3      [  ]      M/S        [  ]        DEG
                                        5     0      23      [IM]  UGM/ M**3      [  ]      M/S        [  ]        DEG


 AQISA  [22 APR 78]
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DAILY AVERAGES SUMMARY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

OCT, 1977

AEROVIRONMENT INC.

FINAL DATA
AS OF 17/JUL/78

DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	WS2 M/S 10M	WD2 DEG 10M	WS3 M/S 30M	WD3 DEG 30M	WS4 M/S 60M	WD4 DEG 60M	BWS1 M/S 10M	BHD1 DEG 10M	BVD1 DEG 10M	BWS3 M/S 60M	BHD3 DEG 60M	BVD3 DEG 60M
1	1	200	1	195	1	225	2	180	*	*	*	*
2	2	185	2	175	2	190	4	180	*	*	*	*
3	4	170	5	165	5	195	11	200	*	*	*	*
4	3	205	4	200	5	215	9	235	*	*	*	*
5	3	165	3	155	4	165	8	185	*	*	*	*
6	5	185	6	175	6	190	11	245	*	*	*	*
7	3	265	5	260	4	280	9	160	*	*	*	*
8	2	165	1	155	2	150	6	180	*	*	*	*
9	3	210	4	200	5	215	10	210	*	*	*	*
10	3	175	3	215	4	205	8	165	*	*	*	*
11	2	180	1	180	1	170	6	150	*	*	*	*
12	2	175	2	155	2	175	6	185	*	*	*	*
13	2	205	2	200	2	215	7	200	*	*	*	*
14	2	220	2	225	2	220	6	160	*	*	*	*
15	1	200	1	210	1	210	6	170	*	*	*	*
16	2	200	2	185	2	210	6	160	*	*	*	*
17	1	195	2	215	1	225	6	160	*	*	*	*
18	2	210	2	185	2	185	7	205	*	*	*	*
19	2	170	3	170	3	195	7	220	*	*	*	*
20	4	190	4	180	5	190	10	230	*	*	*	*
21	2	195	2	195	2	210	6	180	*	*	*	*
22	1	205	1	200	1	230	4	155	*	*	*	*
23	1	205	1	195	1	195	*	185	*	2	125	*
24	1	190	1	185	1	205	*	170	*	2	115	*
25	1	180	1	190	1	175	*	185	*	2	100	*
26	3	170	3	175	3	195	*	220	*	4	95	*
27	3	180	4	180	4	200	*	235	*	6	80	*
28	3	160	4	175	4	175	*	205	*	6	55	*
29	4	155	5	155	5	170	10	165	*	7	135	*
30	3	225	3	220	4	235	7	215	20	6	235	*
31	2	215	2	230	2	230	5	220	25	3	220	*
AV	2	190	3	190	3	200	7	190	*	*	*	*

* INDICATES NOT ENOUGH DATA FOR AVERAGE

AQMAR (04 MAY 78)

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DAILY AVERAGES SUMMARY REPORT

                                                       C-B OIL SHALE PROJECT, COLORADO      *********************
                                                                                            *                   *
                                                       SITE   23                            *     FINAL DATA    *
                                                                                            *  AS OF 17/JUL/78  *
                                                       OCT, 1977                            *                   *
                                                                                            *********************
                                                       AEROVIRONMENT INC.


                                  DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                                 (75% FOR TEMP AND REL HUMIDITY)

   DAY     NOX       NO2       NO        SO2       H2S       O3        THC       HC        CH4       CO
        UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  UGM/M**3  MGM/M**3

     1      5         5         0         0         0        65         *         *         *         *
     2      5         5         0         0         5        75         *         *         *         *
     3      *         *         *         0         5        70         *         *         *         *
     4      *         *         *         0         5        65         *         *         *         *
     5      *         *         *         0         0        45         *         *         *         *
     6      *         *         *         0         0        50         *         *         *         *
     7      *         *         *         *         0         *         *         *         *         *
     8      *         *         *         0         0        75         *         *         *         *
     9      *         *         *         0         0        75         *         *         *         *
    10      *         *         *         0         0        65         *         *         *         *
    11      *         *         *         0         0        65         *         *         *         *
    12      *         *         *         0         0        70         *         *         *         *
    13      *         *         *         0         0        70         *         *         *         *
    14      *         *         *         0         0        65         *         *         *         *
    15      *         *         *         0         0        60         *         *         *         *
    16      *         *         *         0         0        65         *         *         *         *
    17      *         *         *         0         0        65         *         *         *         *
    18      *         *         *         0         0        75         *         *         *         *
    19      *         *         *         0         0        75         *         *         *         *
    20      *         *         *         0         0        65         *         *         *         *
    21      *         *         *         0         5        55         *         *         *         *
    22      *         *         *         0         0        50         *         *         *         *
    23      *         *         *         0         0        70         *         *         *         *
    24      *         *         *         0         0        70         *         *         *         *
    25      *         *         *         0         0        60         *         *         *         *
    26      *         *         *         0         5        60         *         *         *         *
    27      *         *         *         0         0        70         *         *         *         *
    28      *         *         *         0         0        60         *         *         *         *
    29      *         *         *         0         0        60         *         *         *         *
    30      *         *         *         0         0        55         *         *         *         *
    31      *         *         *         0         0        50         *         *         *         *

    AV      *         *         *         0         0        65         *         *         *         *

      * INDICATES NOT ENOUGH DATA FOR AVERAGE
AQMAR  (04 MAY 78)
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DAILY AVERAGES SUMMARY REPORT

                                          C-B OIL SHALE PROJECT, COLORADO    *********************
                                                                             *                   *
                                          SITE   23                          *     FINAL DATA    *
                                                                             *  AS OF 17/JUL/78  *
                                          OCT, 1977                          *                   *
                                                                             *********************
                                          AEROVIRONMENT INC.



                    DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                   (75% FOR TEMP AND REL HUMIDITY)

           DAY    TEM2      TEM3      TEM4      RH1        BARP      SOLR       DT2
                  DEGC      DEGC      DEGC      PER      MM  HG      LY        DEGC
                   10M       30M       60M        1M         0M        0M    60-10M


             1       1         *         *         *          *        23         *
             2       9         *         *         *          *        18         *
             3      11         *         *         *          *        15         *
             4       8         *         *         *          *        10         *
             5       6         *         *         *          *        11         *
             6       6         *         *         *          *        10         *
             7       3         *         *         *          *        18         *
             8       1         *         *         *          *        18         *
             9       8         *         *         *          *        11         *
            10       1         *         *         *          *         9         *
            11      -1         *         *         *          *        18         *
            12       3         *         *         *          *        17         *
            13       5         *         *         *          *        16         *
            14       5         *         *         *          *        16         *
            15       5         *         *         *          *        16         *
            16      13         *         *         *          *        16         *
            17       9         *         *         *          *        20         *
            18       7         *         *         *          *        14         *
            19       7         *         *         *          *        15         *
            20       6         *         *         *          *        10         *
            21       1         *         *         *          *         7         *
            22       0         *         *         *          *        11         *
            23       2         *         *         *          *        14         *
            24       3         *         *         *          *        10         *
            25       5         *         *         *          *        14         *
            26       6         *         *         *          *        14         *
            27       5         *         *         *          *        14         *
            28       8         *         *         *          *         9         *
            29       5         *         *         *          *         9         *
            30      -1         *         *         *          *         7         *
            31      -4         *         *         *          *         4         *

            AV       5         *         *         *          *        13         *

     * INDICATES NOT ENOUGH DATA FOR AVERAGE
AQMAR  (04 MAY 78)
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DAILY AVERAGES SUMMARY REPORT

                                         C-B OIL SHALE PROJECT, COLORADO       **********************
                                                                               *                    *
                                         SITE   23                             *     FINAL DATA     *
                                                                               *  AS OF 17/JUL/78   *
                                         OCT, 1977                             *                    *
                                                                               **********************
                                         AEROVIRONMENT INC.



                              DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                             (75% FOR TEMP AND REL HUMIDITY)

                      DAY   BST1      BST3      BSP1      BSP3      STH2      STH3      STH4
                          DEG       DEG       DEG       DEG       DEG       DEG       DEG
                              10M       60M       10M       60M       10M       30M       60M


                        1      3         *         1         2        12         9        11
                        2      8         *         3         *         9         7         9
                        3     10         *         4         *        10        10        12
                        4      9         *         3         *         8         7         7
                        5     11         *         4         *        11         8        10
                        6     10         *         4         *         8         5         8
                        7     11         *         4         *        11        10        10
                        8     16         *         5         *        14        13        16
                        9     11         *         5         *        10         8         7
                       10      7         *         3         *         7         5         5
                       11     10         *         4         *        10         7         8
                       12     13         *         4         *        14        10        11
                       13     10         *         4         *         9         8        10
                       14      9         *         3         *         8         6         8
                       15     12         *         4         *        10        10        10
                       16     12         *         4         *        11        10        15
                       17     12         *         4         *        12         9         9
                       18     14         *         4         *        13         9        10
                       19     11         *         4         *        11        10        14
                       20     10         *         3         *         8         6         6
                       21      9         *         3         *         9         7         9
                       22      9         *         3         *         8         7        10
                       23     12         *         3         *        10         8         9
                       24     12         *         3         *        11         9        11
                       25     13         *         4         *        11         9        11
                       26      9         *         4         *         8         7         9
                       27      7         *         4         *         8         7         8
                       28     10         *         4         *         9         8         9
                       29      9         *         4         *         9         6         9
                       30      7         7         5         *         8         7         6
                       31      7         6         5         *         7         7         7

                       AV     10         *         4         *        10         8         9

             * INDICATES NOT ENOUGH DATA FOR AVERAGE
       AQMAR  (04 MAY 78)
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DOWNTIME HOURS AND PERCENT EFFICIENCY REPORT

C-B OIL SHALE PROJECT, COLORADO
SITE 23
OCT, 1977
AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
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DAY	PART	RH1	SOLR	SO2	STH2	STH3	STH4	TEM2	TEM3	TEM4	THC	WD2	WD3	WD4	WS2	WS3	WS4
1	0	24	3	0	3	3	3	3	24	24	24	3	3	3	0	0	0
2	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
3	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
4	0	24	4	4	4	4	4	4	24	24	24	4	4	4	4	4	4
5	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
6	0	24	0	6	0	0	0	1	24	24	24	0	0	0	0	0	0
7	0	24	0	12	0	0	0	0	24	24	24	0	0	0	1	1	1
8	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
9	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
10	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
11	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
12	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
13	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
14	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
15	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
16	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
17	0	24	5	0	5	5	5	5	24	24	24	5	5	5	0	0	0
18	0	24	0	0	0	0	0	3	24	24	24	0	0	0	0	0	0
19	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
20	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
21	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
22	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
23	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
24	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
25	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
26	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
27	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
28	0	24	2	3	2	2	2	2	24	24	24	2	2	2	3	3	3
29	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
30	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
31	0	24	0	0	0	0	0	0	24	24	24	0	0	0	0	0	0
TT	0	744	14	25	14	14	14	18	744	744	744	14	14	14	8	8	8
%EFF	100	0	98	96	98	98	98	97	0	0	0	98	98	98	98	98	98

AQDTR (05 APR 78)

DOWNTIME HOURS AND PERCENT EFFICIENCY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

OCT, 1977

AEROVIRONMENT INC.

FINAL DATA
AS OF 17/JUL/78

DAY	BARP	BHD1	BHD3	BSP1	BSP3	BST1	BST3	BVD1	BVD3	BWS1	BWS3	CH4	CO	DT2	H2S	NO	NOX	O3
1	24	3	24	3	0	3	24	24	24	0	24	24	24	24	0	0	0	0
2	24	0	24	0	20	0	24	24	24	0	24	24	24	24	0	0	0	0
3	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	15	15	0
4	24	4	24	4	24	4	24	24	24	4	24	24	24	24	4	24	21	4
5	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	23	0
6	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	15	15	0
7	24	0	24	0	24	0	24	24	24	1	24	24	24	24	0	18	18	0
8	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
9	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
10	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	23	23	0
11	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	19	19	0
12	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	22	22	0
13	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	16	16	0
14	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
15	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
16	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
17	24	5	24	5	24	5	24	24	24	0	24	24	24	24	0	24	24	0
18	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
19	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
20	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
21	24	0	24	0	24	0	24	24	24	0	24	24	24	24	0	24	24	0
22	24	0	14	0	24	0	24	24	24	10	14	24	24	24	0	23	23	0
23	24	0	0	0	24	0	24	24	24	24	0	24	24	24	0	21	21	0
24	24	0	0	0	24	0	24	24	24	24	0	24	24	24	0	24	24	0
25	24	0	0	0	24	0	24	24	24	24	0	24	24	24	0	23	23	0
26	24	0	0	0	24	0	24	24	24	24	0	24	24	24	0	19	19	0
27	24	0	0	0	24	0	24	24	24	24	0	24	24	24	0	20	20	0
28	24	2	2	2	24	2	24	24	24	24	2	24	24	24	2	24	24	3
29	24	0	0	0	24	0	13	13	24	10	0	24	24	24	0	23	23	0
30	24	0	0	0	24	0	0	0	24	0	0	24	24	24	0	23	23	0
31	24	0	0	0	24	0	0	0	24	0	0	24	24	24	0	24	24	0
TT	744	14	520	14	716	14	685	685	744	169	520	744	744	744	6	640	636	7
%EFF	0	98	30	98	3	98	7	7	0	77	30	0	0	0	99	13	14	99

AQDTR (05 APR 78)

DELTA T #2

DEGREES CELSIUS
(TEMP @ 60M - TEMP @ 10M)

C-B OIL SHALE PROJECT, COLORADO

SITE 23

NOV, 1977

AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
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CLOCK HOUR (LOCAL STANDARD TIME)

DAY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE	PEAK
1	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
2	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
3	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
4	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
5	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
6	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
7	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
8	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
9	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(PF)	(PF)	(PF)	(PF)	(PF)	( )	( )
10	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(PF)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
11	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
12	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
13	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
14	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
15	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
16	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	( )	( )
17	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	(IM)	-.6	-.7	-.4	-.1	.2	.1	.0	-.2	-.3	-.2	-.2	.2
18	-.1	-.2	-.2	-.2	-.1	-.3	-.3	-.2	-.5	-.7	-.7	-.6	-.4	-.5	-.6	-.6	-.4	-.3	.1	.0	-.3	-.2	-.1	-.3	-.3	.1
19	-.2	-.2	-.3	-.1	-.4	-.4	-.5	-.5	-.5	-.3	-.2	-.5	1.0	.2	-.7	-.5	-.5	-.5	-.5	-.4	-.5	-.7	-.5	-.5	-.3	1.0
20	-.4	-.4	-.1	.5	.0	-.2	-.6	-.4	.4	-.4	-.8	-.5	-.7	-.9	-1.0	-.8	-.7	-.1	-.1	.3	.3	.8	.8	.7	-.2	.8
21	.8	-.2	-.3	-.3	-.3	-.1	-.1	.4	.1	-.4	-.2	.1	-.1	-.2	-.2	-.1	-.4	-.5	-.4	-.3	-.5	-.5	-.4	-.4	-.2	.8
22	-.2	-.4	-.4	-.5	-.4	-.5	-.5	-.5	-.4	-.3	-.1	-.1	.0	-.2	.3	.2	.0	-.2	-.2	.1	.7	.8	.7	.2	-.1	.8
23	.4	-.1	.6	.7	.2	.4	-.3	-.4	-.2	-.6	-.7	-.8	-.7	-.6	-.6	-.5	-.4	-.2	.5	.2	1.1	1.2	1.0	.4	.0	1.2
24	.1	.5	-.1	.0	-.3	-.4	-.2	-.2	-.4	-.5	-.4	-.6	-.6	-.6	-.6	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	-.3	.5
25	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	-.3	-.2	-.2	-.4	-.1	.3	.4	.3	.5	.5	.2	.4	.1	.5
26	.3	.2	.1	.1	.1	.1	.0	.1	.3	.2	-.1	-.3	-.3	.7	.4	.2	.2	-.1	-.1	-.3	-.2	.1	.4	.8	.1	.8
27	.8	.7	.9	.8	.7	.8	.6	.6	.5	.2	-.5	-.7	-.6	-.5	-.7	-.4	-.5	-.2	-.3	-.3	-.1	-.3	-.2	( )	.1	.9
28	.2	.0	.3	.3	(RF)	(RF)	(RF)	(RF)	(RF)	-.2	-.6	-.7	-.7	-.7	-.7	-.7	-.3	-.5	-.2	.0	.3	.3	-.1	-.1	-.2	.3
29	.2	1.3	1.9	1.3	1.3	1.6	1.5	2.0	.9	.0	-.7	-.7	-.6	-.7	-.6	-.6	-.6	-.5	-.5	-.3	-.2	-.4	-.3	-.1	.2	2.0
30	.2	.2	.4	.7	.6	(RF)	(RF)	(RF)	(RF)	-.8	-.8	-.9	-.9	-.8	-.7	-.6	-.4	-.3	-.2	-.2	.0	.1	.1	.5	-.2	.7
31	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
AV	.2	.1	.2	.3	.1	.1	-.0	.1	.0	-.3	-.5	-.5	-.4	-.4	-.5	-.4	-.3	-.2	-.1	-.1	.1	.1	.1	.1	-.1	( )
SD	.4	.5	.6	.5	.5	.6	.6	.7	.5	.3	.3	.3	.5	.4	.4	.3	.2	.2	.3	.2	.5	.6	.5	.4	.2	( )

AQOUT (15 MAY 78)

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STABILITY CLASS REPORT                                                                         PAGE:   1
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                       C-8 OIL SHALE PROJECT, COLORADO       **********************
                                                                                             *                    *
                                                       SITE   23                             *     FINAL DATA     *
                                                                                             *  AS OF 17/JUL/78   *
                                                       NOV, 1977                             *                    *
                                                                                             **********************
                                                       AEROVIRONMENT INC.


                                        CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  2  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  3  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  4  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  5  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  6  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  7  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  8  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
  9  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [PF]  [PF]  [PF]  [PF]  [PF]
 10  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [PF]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
 11  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
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 13  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
 14  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
 15  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
 16  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]
 17  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]  [IM]     D     D     D     E     E     D     E     D     D     E
 18     E     D     D     D     E     D     D     E     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D
 19     D     D     D     D     D     D     D     D     D     D     D     D     F     E     D     D     D     D     D     D     D     D     D     D
 20     D     D     E     E     E     E     D     D     E     D     C     D     D     B     A     C     D     E     E     E     E     F     F     E
 21     F     E     D     D     D     E     E     E     E     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D
 22     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     E     E     F     E     E
 23     E     E     E     E     E     E     D     D     E     D     D     C     D     D     D     D     D     E     E     E     F     F     F     E
 24     E     E     E     E     D     D     E     E     D     D     D     D     D     D     D  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]
 25  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]  [RF]     D     E     E     D     E     E     D     D     E     E     E     E
 26     E     E     E     E     E     E     E     E     E     E     E     D     D     E     E     E     E     E     E     D     E     E     E     F
 27     F     E     F     F     E     F     E     E     E     E     D     D     D     D     D     D     D     E     D     D     E     D     E  [  ]
 28   * E   * E   * E     E  [RF]  [RF]  [RF]  [RF]  [RF]     E     D     D     D     D     D     D     D     D     E     E     E     E     E     E
 29     E     F     F     F     F     F     F     F     F     E     D     D     D     D     D     D     D     D     D     D     E     D     D     E
 30     E     E     E     E     E  [RF]  [RF]  [RF]  [RF]     C     C     B     B     C     D     D     D     D     E     E     E     E     E     E

*  INDICATES STABILITY CLASS WITHOUT THE WIND SPEED VALUE

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STABILITY CLASS REPORT                                                                         PAGE:  2
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
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                                                      NOV, 1977                            *                  *
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                                        HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  A
                                        CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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STABILITY CLASS REPORT                                                                               PAGE:   3
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                                                              AEROVIRONMENT INC.


                                             HOURLY WIND SPEED AND DIRECTION FOR
                                                      STABILITY CLASS  A
                                             CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY 00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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STABILITY CLASS REPORT                                                                    PAGE:   4
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                 C-B OIL SHALE PROJECT, COLORADO      *********************
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                                                 AEROVIRONMENT INC.


                                   HOURLY WIND SPEED AND DIRECTION FOR
                                          STABILITY CLASS  B
                                   CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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 AQSCR  (05 APR 78)                                                                           WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                     PAGE:  6
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                        C-B OIL SHALE PROJECT, COLORADO     **********************
                                                                                            *                    *
                                                        SITE   23                           *     FINAL DATA     *
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                                                        AEROVIRONMENT INC.


                                          HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  C
                                          CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

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STABILITY CLASS REPORT                                                              PAGE:   7
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                     C-B OIL SHALE PROJECT, COLORADO       **********************
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                                                     SITE   23                             *     FINAL DATA     *
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                                                     AEROVIRONMENT INC.


                                     HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  C
                                     CLOCK HOUR    (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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STABILITY CLASS REPORT
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)

                                        C-B OIL SHALE PROJECT,*COLORADO      *********************
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                                        SITE   23                            *     FINAL DATA    *
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                                        NOV, 1977                            *                   *
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                                        AEROVIRONMENT INC.

                           HOURLY WIND SPEED AND DIRECTION FOR
                                   STABILITY CLASS  D
                           CLOCK HOUR   (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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AQSCR  (05 APR 78)                                                    WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                     PAGE:  9
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                   C-B OIL SHALE PROJECT, COLORADO     ***********************
                                                                                       *                     *
                                                   SITE   23                           *     FINAL DATA      *
                                                                                       *  AS OF 17/JUL/78    *
                                                   NOV, 1977                           *                     *
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                                                   AEROVIRONMENT INC.


                                      HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  D
                                      CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY     00     01     02     03     04     05     06     07     08     09     10     11     12     13     14     15     16     17     18     19     20     21     22     23

17 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      5      4      5 [    ] [    ]      5 [    ]      5      6 [    ]
   [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]    SSW    SSW    SSW [    ] [    ]    SSW [    ]    SSW    SSW [    ]
18 [    ]      6      6      5 [    ]      1      1 [    ]      4      1      2      6      8      9     10      8      8      8      7      6      7      9      9      7
   [    ]    SSW     SW      W [    ]    WSW      E [    ]    WNW     NW    SSE    SSW    SSW    SSW    SSW    SSW    SSW      S      S      S    SSW    SSW    SSW    SSW
19      8      9      8      8      8      8      6      6      6      7      6      4 [    ] [    ]      3      3      2      1      1      1      3      4      3      4
       SW     SW    SSW    SSW    SSW      S    SSW    SSW    SSW    SSW    WSW     NW [    ] [    ]     NW     NW     NW     NW     NW     NW     NW     NW      W      W
20      5      5 [    ] [    ] [    ] [    ]      3      3 [    ]      2 [    ]      4      3 [    ] [    ] [    ]      1 [    ] [    ] [    ] [    ] [    ] [    ] [    ]
        W    WSW [    ] [    ] [    ] [    ]    SSW    SSW [    ]     SW [    ]      W    WNW [    ] [    ] [    ]     NW [    ] [    ] [    ] [    ] [    ] [    ] [    ]
21 [    ] [    ]      2      3      3 [    ] [    ] [    ] [    ]      3      8      9      8      8      9     11      9      7      6      7      3      3      6      3
   [    ] [    ]    SSW      S      S [    ] [    ] [    ] [    ]    SSE      S    SSW      S      S     SW    SSW      S    SSW      S    SSW      S    SSW      S      S
22      6      7      2      6      9      8      5      7      8      8     10     10     10     10      8      7      7      6      6 [    ] [    ] [    ] [    ] [    ]
        S      S    SSE    SSW      S      S    SSW    SSW    SSW    SSW    SSW    SSW     SW     SW     SW     SW     SW     SW     SW [    ] [    ] [    ] [    ] [    ]
23 [    ] [    ] [    ] [    ] [    ] [    ]      2      2 [    ]      1      1 [    ]      1      1      2      3      3 [    ] [    ] [    ] [    ] [    ] [    ] [    ]
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24 [    ] [    ] [    ] [    ]      5      6 [    ] [    ]      4      6      5      5      4      5      5 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]
   [    ] [    ] [    ] [    ]    SSW    SSW [    ] [    ]      S    SSW    SSW    SSW    SSW    SSW    SSW [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]
25 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      3 [    ] [    ]      4 [    ] [    ]      5      5 [    ] [    ] [    ] [    ]
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26 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      2      1 [    ] [    ] [    ] [    ] [    ] [    ]      1 [    ] [    ] [    ] [    ]
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27 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      2      2      1      1      3      3      2 [    ]      1      1 [    ]      1 [    ] [    ]
   [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]     SW    ESE    ESE      E    SSW    SSW      S [    ]      S    SSW [    ]     SW [    ] [    ]
28 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      2      2      0      0      0      1      1      0 [    ] [    ] [    ] [    ] [    ] [    ]
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29 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      1      4      5      5      6      6      5      5      3      3 [    ]      2      2 [    ]
   [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]    WNW    SSW    SSW    SSW    SSW    SSW      S      S      S      S [    ]    SSE    SSE [    ]
30 [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ] [    ]      6      5      5      5 [    ] [    ] [    ] [    ] [    ] [    ]
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STABILITY CLASS REPORT                                                                                    PAGE: 10
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                        C-B OIL SHALE PROJECT, COLORADO     *********************
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                                                        AERUVIRONMENT INC.


                                          HOURLY WIND SPEED AND DIRECTION FOR
                                                 STABILITY CLASS  E
                                          CLOCK HOUR   (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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STABILITY CLASS REPORT                                                                          PAGE: 11
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                        C-B OIL SHALE PROJECT, COLORADO         ***********************
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                                                        SITE   23                               *     FINAL DATA      *
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                                                        AEROVIRONMENT INC.

                                       HOURLY WIND SPEED AND DIRECTION FOR
                                               STABILITY CLASS  E
                                       CLOCK HOUR    (LOCAL STANDARD TIMES)

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  18     3 [   ] [   ] [   ]     2 [   ] [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
         S [   ] [   ] [   ]   NNW [   ] [   ]   WSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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  20 [   ] [   ]     5     4     3     3 [   ] [   ]     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     0     1     1     1 [   ] [   ]     2
     [   ] [   ]    SW    SW    SW   SSW [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW   SSW   SSW   SSE [   ] [   ]   SSE
  21 [   ]     1 [   ] [   ] [   ]     2     1     2     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ]     S [   ] [   ] [   ]    SE    SE     N   ESE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  22 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     3 [   ]     3     3
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW   SSW [   ]   SSW     S
  23     2     3     2     1     3     3 [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     2     1 [   ] [   ] [   ]     2
       SSE     S     E   ENE   WSW     W [   ] [   ]   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WSW    SW    SE [   ] [   ] [   ]    SE
  24     2     3     3     4 [   ] [   ]     5     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
         S   SSW   SSW   SSW [   ] [   ]   SSW   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  25 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     3 [   ]     4     4 [   ] [   ]     4     5     4     5
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     W   SSW [   ]   SSW   SSW [   ] [   ]   SSW   SSW   SSW   SSW
  26     3     2     1     2     2     1     0     1     1     3     2 [   ] [   ]     1     3     3     2     1     1 [   ]     0     1     1 [   ]
       SSW   SSW   SSW   SSW   SSW   SSW   SSW   SSW   SSW   SSE    NW [   ] [   ]   WNW   WNW   WNW     W     W   WNW [   ]    NW    NW   SSE [   ]
  27 [   ]     2 [   ] [   ]     2 [   ]     0     1     1     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ]     0 [   ]     1 [   ]
     [   ]   SSE [   ] [   ]    SE [   ]    SW   ESE   SSE   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SE [   ] [   ]     S [   ]     W [   ]
  28  (RF)  (RF)  (RF)     1 [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     0     0     0     0     0     0
        SW   SSE    SE     S [   ] [   ] [   ] [   ] [   ]     E [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW    NW    NW   WNW   WNW   WNW
  29     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ]     3
       WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SE [   ] [   ]   SSW
  30     0     1     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3     3     2     2     2     3
       SSW    SE   ESE     S   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW     W    NW   WNW     W   WNW

 AQSCR  (05 APR 78)                                                                   WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                   PAGE:  12
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                     C-B OIL SHALE PROJECT, COLORADO        *********************
                                                                                            *                   *
                                                     SITE   23                              *     FINAL DATA    *
                                                                                            *  AS OF 17/JUL/78  *
                                                     NOV, 1977                              *                   *
                                                                                            *********************
                                                     AEROVIRONMENT INC.


                                       HOURLY WIND SPEED AND DIRECTION FOR
                                            STABILITY CLASS  F
                                       CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

  1 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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  6 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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  8 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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  9 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 10 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 11 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 12 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 13 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 14 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 15 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 16 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]

AQSCR  (05 APR 78)                                                                WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                          PAGE: 13
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                        C-8 OIL SHALE PROJECT, COLORADO       ***********************
                                                                                              *                     *
                                                        SITE   23                             *     FINAL DATA      *
                                                                                              *   AS OF 17/JUL/78   *
                                                        NOV, 1977                             *                     *
                                                                                              ***********************
                                                        AEROVIRONMENT INC.


                                        HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  F
                                        CLOCK HOUR    (LOCAL STANDARD TIMES)

DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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18  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
19  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
20  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE   SSE [   ]
21      1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
      SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
22  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ]
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23  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     2     1 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S     S   SSW [   ]
24  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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25  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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26  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE
27      3 [   ]     1     2 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
      SSE [   ]   SSE    SE [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
28  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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29  [   ]     0     0     0     0     0     0     0     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ]   WNW   WNW   WNW   WNW   WNW   WNW   WNW   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
30  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 AQSCR  (05 APR 78)                                                                    WIND SPEED: M/S
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DELTA T #2

DEGREES CELSIUS
(TEMP @ 60M - TEMP @ 10M)

                                                  C-B OIL SHALE PROJECT, COLORADO      **********************
                                                                                       *                    *
                                                  SITE   23                            *     FINAL DATA     *
                                                                                       *  AS OF 17/JUL/78   *
                                                  DEC, 1977                            *                    *
                                                                                       **********************
                                                  AEROVIRONMENT INC.



                                     CLOCK HOUR  (LOCAL STANDARD TIME)

DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23    AVE PEAK

  1  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)   -.5   -.9   -.9   -.9   -.8   -.8   -.7   -.7   -.6   -.6   -.5   -.5   -.4   -.5    .1    -.6   .1
  2   -.4   -.4   -.4   -.1   -.2   -.3   -.3   -.3   -.3   -.4   -.4   -.6   -.6  (RF)  (RF)    .2   -.1   -.1    .0    .0    .0    .1   -.2   -.2    -.2   .2
  3    .1    .4    .2    .2    .1    .6    .3    .9   1.1   -.2   -.4   -.4   -.5   -.4   -.2   -.1    .4   1.0   1.4   1.0    .4    .6    .9    .1     .3  1.4
  4   -.3    .2    .3    .4    .9    .9    .0   -.3   -.2    .0    .0    .1   -.1   -.1   -.4   -.2   -.2   -.1   -.2   -.1   -.3   -.3   -.4   -.4    -.0   .9
  5   -.5   -.4   -.3   -.3   -.5   -.5   -.5   -.4   -.5   -.4   -.2   -.7   -.3   -.3   -.2   -.2   -.3    .0    .6   1.3    .1    .1    .6   1.2    -.1  1.3
  6   1.1  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)   -.3   -.5   -.3   -.1    .0   -.3   -.3    .0   -.1    .4    .5    .5    .3    .3    .6    .3     .1  1.1
  7    .4    .5    .1    .7    .3  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)   -.5   -.2   -.3   -.1   -.1    .0   -.2   -.1    .0   -.2    .0     .0   .7
  8   -.1   -.2   -.2   -.3  (RF)  (RF)  (RF)  (RF)  (RF)  -1.2  -1.2  -1.1   -.7   -.3   -.2   -.2   -.5   -.3    .0    .8    .9   1.2   1.3    .7    -.1  1.3
  9   1.3   1.1   1.3   1.6   1.2   1.4   1.0    .6    .7    .0   -.4   -.5   -.2   -.6   -.6   -.6   -.3    .0    .1    .2    .5    .5    .3    .4     .4  1.6
 10    .3    .4    .1    .3    .5    .9   1.2   1.9   1.1   -.2   -.7  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)     .5  1.9
 11  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 12  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 13  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 14  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 15  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 16  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 17  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 18  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 19  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 20  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)   2.5   1.7   1.3   1.1   1.1    .8   1.1   1.3    1.4  2.5
 21   1.1   1.3   1.8    .2    .6   2.3   1.3   2.5   2.2   1.1    .7   1.2   1.1   1.7   1.0   -.6   -.1    .0    .6    .3    .5    .2    .3    .2     .9  2.5
 22    .3   -.2    .1    .3   -.3   -.4   -.5   -.3   -.2   -.1   -.3   -.2    .2    .2   -.5   -.3   -.3   -.4   -.4   -.4   -.4   -.3   -.3   -.3    -.2   .3
 23   -.4   -.4   -.2   -.2    .0   -.3   -.1   -.4   -.4   -.1   -.2   -.4   -.3   -.1   -.1   -.1    .0   -.1   -.1    .0   -.4   -.4    .0   -.2    -.2   .0
 24  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 25  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 26  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 27  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 28  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  [  ] [  ]
 29  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)   -.7   -.6   -.5   -.5   -.5   -.3   -.1   -.1   -.3   -.4   -.5   -.5   -.5    -.4  -.1
 30   -.5   -.4   -.5   -.5   -.5   -.5   -.5   -.3   -.5   -.6   -.5   -.5   -.5  (MT)   -.2   -.5   -.4   -.5   -.4   -.3   -.2   -.3   -.6   -.6    -.4  -.2
 31.  -.6   -.5   -.3   -.2   -.3   -.1   1.4    .7    .5   -.2   -.7   -.7   -.8   -.7   -.8   -.6   -.5    .3   1.3   1.0    .7   1.5   1.3    .6     .1  1.5

 AV    .1    .1    .2    .2    .2    .4    .3    .4    .3   -.2   -.4   -.4   -.3   -.2   -.3   -.3   -.1    .1    .3    .3    .1    .2    .2    .2     .1 [  ]
 SD    .6    .6    .6    .5    .5    .9    .7   1.0    .8    .5    .4    .5    .5    .6    .4    .3    .7    .6    .6    .6    .5    .6    .6    .5     .5 [  ]

AQOUT    (15 MAY 78)
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STABILITY CLASS REPORT                                                                              PAGE:   1
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                              C-B OIL SHALE PROJECT, COLORADO       *********************
                                                                                                    *                   *
                                                              SITE   23                             *    FINAL DATA     *
                                                                                                    *  AS OF 17/JUL/78  *
                                                              DEC, 1977                             *                   *
                                                                                                    *********************
                                                              AEROVIRONMENT INC.


                                          CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)  (IM)     D     C     B     B     C     C     D     D     D     D     D     D     D     D     E
  2     D     D     D     D     D     D     D     D     D     D     D     D     D  (RF)  (RF)     D     D     D     D     D     D     D     E     E
  3     E     E     E     E     E     E     E     F     F     E     D     D     D     D     E     E     E     F     F     F     E     E     F     E
  4     D     E     E     E     F     F     E     D     D     D     D     D     D     D     D     E     E     E     D     D     D     D     D     D
  5     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     E     E     F     E     E     E     F
  6     F  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)   * D     D     D     D     D     D     D     D     D     E     E     E     D     E     E     E
  7     D     D     D     D     D  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)     D     D     D     D     D     D     D     D     D     D     E
  8     D   * E     E     D  (RF)  (RF)  (RF)  (RF)  (RF)     B     B     B     D     D     D     D     D     D     E     F     F     F     F     E
  9     F     F     F     F     F     F     F     E     E     E     D     D     D     D   * D     D     D     E     E     E     E     E     E     E
 10     E     E     E     E     E     F     F     F     F     E     D  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 11  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 12  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 13  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 14  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 15  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 16  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 17  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 18  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 19  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 20  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)     F     F     F     F     F     F     F     F
 21     F     F     F     E     E     F     F     F     F     F     E     F     F     F     F     D     E     E     E     E     E     E     E     E
 22     E     E     E     E     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D
 23     D     D     D     E     E     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     D     E     E
 24  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 25  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 26  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 27  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 28  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)
 29  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)  (RF)     D     D     D     D     D     D     E     E     D     D     D     D     D
 30     D     D     D     D     D     D     D     D     D     D     D     D     D  (MT)     D     D     D     D     D     D     E     D     D     D
 31     D     D     D     E     D     E     F     E     E     E     D     D     C     D     C     D     D     E     F     F     E     F     F     E

 *  INDICATES STABILITY CLASS WITHOUT THE WIND SPEED VALUE

AQSCR  (05 APR 78)                                                                    WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                      PAGE:  2
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                                    C-B OIL SHALE PROJECT, COLORADO         *********************
                                                                                                            *                   *
                                                                    SITE   23                               *     FINAL DATA    *
                                                                                                            *  AS OF 17/JUL/78  *
                                                                    DEC, 1977                               *                   *
                                                                                                            *********************
                                                                    AEROVIRONMENT INC.


                                        HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  A
                                        CLOCK HOUR   (LOCAL STANDARD TIMES)

DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  2 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  3 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  4 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  5 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  6 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  7 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  8 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
  9 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 10 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 11 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 12 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 13 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 14 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 15 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
 16 [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]
    [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]  [  ]

 AQSCR  (05 APR 78)                                                                                 WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                   PAGE:   3
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                          C-B OIL SHALE PROJECT, COLORADO      **********************
                                                                                               *                    *
                                                          SITE   23                            *     FINAL DATA     *
                                                                                               *  AS OF 17/JUL/78   *
                                                          DEC, 1977                            *                    *
                                                                                               **********************
                                                          AEROVIRONMENT INC.


                                         HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  A
                                         CLOCK HOUR    (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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                                                            AEROVIRONMENT INC.


                                              HOURLY WIND SPEED AND DIRECTION FOR
                                                   STABILITY CLASS  B
                                              CLOCK HOUR    (LOCAL STANDARD TIMES)


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STABILITY CLASS REPORT                                                                              PAGE:  5
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                                                              C-B OIL SHALE PROJECT, COLORADO       **********************
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                                             HOURLY WIND SPEED AND DIRECTION FOR
                                                  STABILITY CLASS  B
                                             CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY  00  01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23

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STABILITY CLASS REPORT                                                                                   PAGE:   6
STABILITY DETERMINED FROM
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                                                      C-B OIL SHALE PROJECT, COLORADO         *********************
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                                                 STABILITY CLASS  C
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 11 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 15 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 16 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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AQSCR  (05 APR 78)                                                                WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                       PAGE:  7
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                                 C-B OIL SHALE PROJECT, COLORADO          ********************
                                                                                                          *                  *
                                                                 SITE   23                                *    FINAL DATA    *
                                                                                                          *  AS OF 17/JUL/78 *
                                                                 DEC, 1977                                *                  *
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                                                                 AEROVIRONMENT INC.


                                              HOURLY WIND SPEED AND DIRECTION FOR
                                                   STABILITY CLASS  C
                                              CLOCK HOUR   (LOCAL STANDARD TIMES)

DAY   00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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18   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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19   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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20   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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21   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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22   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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23   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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24   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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25   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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26   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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27   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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28   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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29   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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30   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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31   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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    AQSCR  (05 APR 78)                                                                                     WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                        PAGE:   8
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                          C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                              *                   *
                                                          SITE   23                           *    FINAL DATA     *
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                                                          DEC, 1977                           *                   *
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                                                          AEROVIRONMENT INC.


                                      HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  D
                                      CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ]     4     4     5     4     4     5     6     6 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE [   ] [   ] [   ] [   ] [   ]   SSW   SSW    SW   SSW   SSW   SSW   SSW    SW [   ]
  2     5     6     6     7     6     6     6     5     5     5     6     5     6 [   ] [   ]     8     7     7     7     6     7     6 [   ] [   ]
       SW    SW    SW    SW    SW    SW   SSW   SSW   SSW   SSW   SSW   SSW   SSW [   ] [   ]    SW   SSW   SSW    SW   SSW   SSW   SSW [   ] [   ]
  3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     4     3     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WSW    SW    SW    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  4     3 [   ] [   ] [   ] [   ] [   ] [   ]     5     5     6     7     6     5     6     5 [   ] [   ] [   ]     5     5     5     4     4     4
       SW [   ] [   ] [   ] [   ] [   ] [   ]     W     W     W     W     W     W   WSW    SW [   ] [   ] [   ]     W     W     W   WNW   WNW    NW
  5     5     5     6     7     6     5     4     4     4     5     5     5     5     5     5     5     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
       NW   WNW   WNW   WNW   WNW   WNW   WNW   WNW   WNW   WNW   WNW    NW   WNW     W   WNW   WNW   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  6 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]  (RF)     7     7     9    10     9     8     8     6 [   ] [   ] [   ]     5 [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW   SSW    SW    SW   SSW   SSW   SSW   SSW [   ] [   ] [   ]    SW [   ] [   ] [   ]
  7     5     5     6     5     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     5     6     6     6     6     7     5     7     7     5 [   ]
      SSW   SSW   SSW   SSW   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW    SW    SW    SW    SW    SW    SW    SW    SW   WSW [   ]
  8     5 [   ] [   ]     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [ ' ]     5     6     7     6     4     1 [   ] [   ] [   ] [   ] [   ] [   ]
        W [  _] [   ]   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW    NW   WNW   WNW    NW     W [   ] [   ] [   ] [   ] [   ] [   ]
  9 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     5     8     6  (RF)     6     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 14 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 15 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 16 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]

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STABILITY CLASS REPORT                                                                PAGE:   9
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                   C-B OIL SHALE PROJECT, COLORADO    *********************
                                                                                      *                   *
                                                   SITE   23                          *     FINAL DATA    *
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                                                   DEC, 1977                          *                   *
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                                                   AEROVIRONMENT INC.


                                       HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  D
                                       CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17  (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
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19  (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
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22  (   ) (   ) (   ) (   )     4     1     3     6     8     8     6     6     7     7     4     6     8     6     7     6     5     6     6     6
    (   ) (   ) (   ) (   )    SW   WSW   WSW    SW    SW    SW    SW    SW    SW    SW    SW    SW    SW   SSW   SSW   SSW   SSW   SSW   SSW   SSW
23      6     6     5 (   ) (   )     5     8     7     7    10    10     9     8     9     9     9     9     8     8     9     7     4 (   ) (   )
      SSW   SSW     S (   ) (   )     S     S     S     S   SSW   SSW   SSW   SSW   SSW   SSW    SW    SW    SW    SW    SW    SW    SW (   ) (   )
24  (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )
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29  (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )     1     1     1     1     0     1 (   ) (   )     2     0     3     1     2
    (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   ) (   )    SW    SW  (VA)    NW     N     E (   ) (   )   SSW     S   SSW   SSE  (VA)
30      4     4     5     2     1     2     2     2     1     5     5     6     6 (   )     5     5     4     6     6     4 (   )     5     3     4
       SW   SSW   SSW  (VA)    SE  (VA)   ESE     E    NE   SSW   SSW   SSW    SW (   )   SSW   SSW   SSW   SSW   SSW   WSW (   )     W    NW    NW
31      4     3     2 (   )     1 (   ) (   ) (   ) (   ) (   )     0     1 (   )     1 (   )     0     1 (   ) (   ) (   ) (   ) (   ) (   ) (   )
      WNW   WSW     W (   )     W (   ) (   ) (   ) (   ) (   )     E    NE (   )    NE (   )   NNE   WNW (   ) (   ) (   ) (   ) (   ) (   ) (   )

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STABILITY CLASS REPORT                                                                           PAGE:  10
STABILITY DETERMINED FROM
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                                                     AEROVIRONMENT INC.


                                       HOURLY WIND SPEED AND DIRECTION FOR
                                               STABILITY CLASS  E
                                       CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

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  2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     5     5
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW
  3     5     3     1     2     1     2     1 [   ] [   ]     4 [   ] [   ] [   ] [   ]     4     3     2 [   ] [   ] [   ]     2     2 [   ]     4
      SSW   SSW    SE   SSW   SSE   SSW     E [   ] [   ]   WSW [   ] [   ] [   ] [   ]   WSW   WSW   SSW [   ] [   ] [   ]   SSW   WSW [   ]   WSW
  4 [   ]     3     1     1 [   ] [   ]     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     5     4     4 [   ] [   ] [   ] [   ] [   ] [   ]
    [   ]     S   SSW   SSW [   ] [   ]     W [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     W   WSW     W [   ] [   ] [   ] [   ] [   ] [   ]
  5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3     2 [   ]     1     1     1 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     W   WSW [   ]   SSE   SSE     S [   ]
  6 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     1     3 [   ]     3     3     5
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW    SE   SSW [   ]    SW   SSW   SSW
  7 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4
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  8 [   ]  (RF)     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ]     1
    [   ]     W   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WSW [   ] [   ] [   ] [   ]     S
  9 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3     2     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     5     4     4     4     4     4     4
    [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S   SSE   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW   SSW   SSW   SSW   SSW   SSW
 10     5     3     0     1     1 [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
      SSW   SSW    SE   ESE    SE [   ] [   ] [   ] [   ]   ENE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 14 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 16 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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STABILITY CLASS REPORT                                                                                      PAGE: 11
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                                 C-B OIL SHALE PROJECT, COLORADO        **********************
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                                          HOURLY WIND SPEED AND DIRECTION FOR
                                                 STABILITY CLASS  E
                                          CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY   00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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18  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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19  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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20  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
21  [   ] [   ] [   ]     1     1 [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ]     3     2     3     2     1     3     3     3
    [   ] [   ] [   ]   SSW   ESE [   ] [   ] [   ] [   ] [   ]    NE [   ] [   ] [   ] [   ] [   ]   SSE    SE   ESE   ESE   WSW    SE   ENE     S
22      1     2     2     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
      WSW  [VA]    SE  [VA] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
23  [   ] [   ] [   ]     3     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     4
    [   ] [   ] [   ]   SSE     S [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW
24  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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25  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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26  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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27  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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28  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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29  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     2 [   ] [   ] [   ] [   ] [   ]
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30  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4 [   ] [   ] [   ]
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31  [   ] [   ] [   ]     2 [   ]     2 [   ]     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ]     1 [   ] [   ]     0
    [   ] [   ] [   ]     W [   ]    NW [   ]    SW    SW   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW [   ] [   ]     S [   ] [   ]   WNW

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STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                          C-B OIL SHALE PROJECT, COLORADO      *********************
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                                                          AEROVIRONMENT INC.


                                          HOURLY WIND SPEED AND DIRECTION FOR
                                                 STABILITY CLASS  F
                                          CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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  2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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  3 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     2     2 [   ] [   ]     3 [   ]
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  4 [   ] [   ] [   ] [   ]     2     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ]   SSW    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ] [   ]     2
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW [   ] [   ] [   ]     S
  6     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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  8 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     0     1 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSE    SE   SSE [   ]
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      SSW     S   SSW   SSW   SSE   SSE     S [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 10 [   ] [   ] [   ] [   ] [   ]     1     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 13 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 14 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 15 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 16 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]

AQSCR  (05 APR 78)                                                                  WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                          PAGE: 13
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)
                                                       C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                           *                   *
                                                       SITE   23                           *     FINAL DATA    *
                                                                                           *  AS OF 17/JUL/78  *
                                                       DEC, 1977                           *                   *
                                                                                           *********************
                                                       AEROVIRONMENT INC.

                                        HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  F
                                        CLOCK HOUR    (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

17  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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18  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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19  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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20  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]   0    2    3    1    1    2    2    2
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]  WNW  SSW   S   SW    S   SE   SSE  SE
21    2    2    2  [  ] [  ]   2    2    2    2    2  [  ]   1    1    1    1  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
     ESE  ESE  ESE [  ] [  ]  ESE  SE   SE   ESE  ESE [  ]  ENE  NNE   N   SE  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
22  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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23  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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24  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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25  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
26  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
27  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
28  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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29  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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30  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
    [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
31  [  ] [  ] [  ] [  ] [  ] [  ]   2  [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]   1    2  [  ]   2    1  [  ]
    [  ] [  ] [  ] [  ] [  ] [  ]  WSW [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]  SW   WNW [  ]  SW   ENE [  ]

 AQSCR  (05 APR 78)                                                                 WIND SPEED: M/S
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BAROMETRIC PRESSURE

MM OF HG
                                                     C-B OIL SHALE PROJECT, COLORADO        **********************
                                                                                             *                    *
                                                     SITE   23                               *     FINAL DATA     *
                                                                                             *  AS OF 17/JUL/78   *
                                                     JAN, 1978                               *                    *
                                                                                             **********************
                                                     AEROVIRONMENT INC.


                                   CLOCK HOUR  (LOCAL STANDARD TIME)


DAY    00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23    AVE PEAK

  1  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
  2  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
  3  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
  4  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
  5  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  587  587  587  587  587  587  587  587   587  587
  6  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  584  584  584  584  585  585  585  586  586  586  586  586   585  586
  7   586  587  587  587  587  587  588  588  589  589  589  589  589  589  589  590  590  590  590  590  591  591  591  591   589  591
  8   591  591  591  591  591  591  591  591  591  591  591  591 (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)   591  591
  9  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 10  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 11  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 12  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (MT) (RF)  601  601  602  602  602  603  603  603  603  604  604   603  604
 13   604  604  604  604  604  604  604  604  604  604  604  604  604  603  603  603  603  603  603  603  603  603  602  602   603  604
 14   602  602  602  602  601  601  601  601  600  600  600  599  598  598  598  598  598  598  597  597  597  596  596  595   599  602
 15   595  594  594  593  592  592  592  591  591  591  590  590  590  589  589  589  589  589  589  590  591  592  592  592   591  595
 16   592  593  594  594  595  595  596  596  596  597  597  597  597  596  596  596  596  596  596  595  596  596  596  595   596  597
 17   595  595  595  594  594  594  594  594  594  594  594  594  593  593  593  593  594  594  594  594  595  595  595  595   594  595
 18   595  595  596  596  596  597  597  598  598  599  599  599  599  598  598  599  599  599  599  599  600  599  599  599   598  600
 19   599  599  598  598  598  598  598  598  598  598  598  597  597  596  595  595  595  595  595  595  595  595  595  595   597  599
 20   594  594  594  594  594  594  595  595  595  596  595  596  595  595  595  596  596  597  597  597  597  597  598  598   596  598
 21   598  598  598  598  598  598  599  599  599  600  600  600  599  599  599  599  599  600  600  600  600  600  600  601   599  601
 22   600  600  600  600  600  600  600  600  600  601  601  600  600  599  598  598  598  598  597  597  597  597  597  596   599  601
 23   595  595  595  595  594  594  594  594  594  594  593  593  592  592  592  592  592  593  593  594  594  594  595  595   594  595
 24   595  595  596  596  597  597  597  597  598  598  598  598  598  598  598  598  598  598  598 (RF) (RF) (RF) (RF) (RF)   597  598
 25  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  600  600  600  599  599  599  599  599  598  598  598  598  598  598   599  600
 26   598  598  598  598  598  598  598  598  598  598  598  598  598 (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)   598  598
 27  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 28  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 29  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 30  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]
 31  (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF) (RF)  [  ] [  ]

 AV   596  596  596  596  596  596  596  596  596  597  597  597  596  596  595  596  595  595  595  595  596  596  596  596   595 [  ]
 SD     4    4    4    4    4    4    4    4    4    4    4    4    5    5    5    5    5    5    5    5    5    5    5    5     5 [  ]

AQOUT    [15 MAY 78]
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DELTA T #2

DEGREES CELSIUS

C-B OIL SHALE PROJECT, COLORADO

SITE 23

JAN, 1978

AEROVIRONMENT INC.

****
* FINAL DATA *
* AS OF 17/JUL/78 *
****

CLOCK HOUR (LOCAL STANDARD TIME)

DAY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVE	PEAK
1	1.4	1.1	1.7	.8	1.1	.7	1.1	1.3	1.5	.6	-.3	-.8	-.8	-.8	-.8	-.7	-.6	-.2	.0	-.1	.2	.8	1.1	1.1	.4	1.7
2	1.7	1.4	1.6	1.9	1.8	2.0	2.1	2.0	1.9	1.7	1.1	.2	.1	-.1	-.1	.3	-.1	-.6	-.6	-.4	-.4	-.3	-.3	-.3	.7	2.1
3	-.2	-.1	.1	.3	.1	.1	-.3	-.4	-.5	-.6	-.6	-.6	-.6	-.6	-.5	.1	-.2	-.3	-.4	-.3	-.1	.3	.6	.1	-.2	.6
4	-.2	.2	-.3	-.3	-.2	-.1	.1	-.3	-.1	-.3	-.1	-.3	-.4	-.1	-.3	-.6	-.5	-.5	-.3	-.1	.0	.1	.1	.1	-.2	.2
5	-.3	-.3	-.3	-.2	-.2	-.5	-.1	-.1	-.2	-.1	-.1	.2	.0	-.3	-.6	-.6	-.6	-.4	-.2	-.2	-.4	-.3	-.3	-.4	-.3	.2
6	-.3	-.4	-.2	-.5	-.5	-.4	-.5	-.3	-.5	-.4	-.1	-.3	-.6	-.5	-.5	-.5	-.3	-.4	-.3	-.3	.1	.2	.1	.3	-.3	.3
7	.9	.8	.4	.3	.2	.3	.8	.8	.8	-.5	-.8	-.7	-.7	-.7	-.8	-.7	-.4	.3	1.1	1.2	.8	1.6	1.4	1.3	.3	1.6
8	.6	1.1	.7	1.6	.9	.9	.9	1.1	.8	-.1	-.6	-.3	-.7	-.6	-.6	-.6	-.3	-.3	.2	.3	.3	-.1	.2	-.3	.2	1.6
9	-.3	.1	.2	-.1	.1	.1	-.2	-.3	-.4	-.3	-.5	-.7	-.7	-.4	-.5	-.5	-.4	-.2	-.1	.3	-.3	-.1	.0	-.2	-.2	.3
10	-.5	-.4	-.5	-.5	-.5	-.5	-.2	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.2	-.3	-.2	.1	-.2	-.3	-.2	-.3	-.4	.1
11	-.3	-.3	-.1	-.2	-.5	-.3	-.3	-.3	-.3	-.5	-.7	-.7	-.6	-.3	-.5	-.6	.1	-.2	.5	1.1	.8	.3	.8	1.1	-.1	1.1
12	.8	1.1	.6	1.4	.5	2.0	1.9	.5	.8	.4	-.6	-.7	-.7	-.7	-.1	-.6	-.6	-.4	-.2	-.3	-.2	.1	.8	.9	.3	2.0
13	.2	.6	.6	.5	.6	.1	-.1	.1	.3	.6	-.5	-.6	-.7	-.7	-.6	-.7	-.6	-.1	.4	1.0	1.4	1.8	2.1	2.0	.3	2.1
14	.9	.6	1.3	1.0	.6	.3	.4	-.3	.1	-.5	-.6	-.6	-.6	-.5	-.6	-.5	-.5	-.5	-.3	-.5	-.3	.0	-.2	-.5	-.1	1.3
15	-.1	-.3	-.3	-.5	-.3	-.3	-.3	-.3	-.3	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.5	-.3	-.3	-.3	-.3	-.4	-.5	-.4	-.1
16	-.5	-.5	-.5	-.5	-.4	-.3	.6	1.6	1.0	-.2	-.5	-.7	-.4	-.6	-.1	-.6	-.5	-.2	.0	-.3	-.3	-.3	-.4	-.5	-.2	1.6
17	-.3	-.3	-.1	-.2	-.5	-.3	-.1	-.2	-.5	-.6	-.6	-.5	-.6	-.6	-.6	-.4	-.6	-.5	-.3	-.3	-.3	-.3	-.5	-.5	-.4	-.1
18	-.5	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.7	-.9	-1.1	-.7	-.7	-.7	-.6	-.5	-.4	-.1	.1	-.3	-.3	-.3	-.5	.1
19	1.6	1.1	1.6	1.7	2.6	1.0	1.6	.7	.3	-.6	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.5	-.2	-.3	-.3	-.2	-.3	-.1	.2	2.6
20	.0	.0	-.1	-.2	.0	.1	-.3	-.3	-.1	-.3	-.6	-.7	-.7	-.8	-.7	-.8	-.6	-.5	-.5	-.5	-.3	-.4	-.3	-.3	-.4	.1
21	-.4	-.3	-.3	-.3	-.4	-.5	-.5	-.5	-.5	-.5	-.8	-.8	-.8	-.7	-.7	-.7	-.6	-.3	.2	1.7	1.9	.5	.0	.3	-.2	1.9
22	.1	.3	.1	.1	.1	.7	.9	.5	-.1	-.6	-.8	-.7	-.7	-.8	-.8	-.7	-.6	-.5	-.4	-.3	-.4	-.6	-.6	-.6	-.3	.9
23	-.6	-.6	-.5	-.4	-.5	-.4	-.2	-.2	-.3	-.6	-.8	-.8	-.7	-.7	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.8	-.6	-.2
24	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.7	-.8	-1.1	-1.4	-1.7	-1.1	-.8	-.9	-.8	-.7	-.4	.5	1.1	1.0	.9	1.1	1.0	-.4	1.1
25	.7	1.0	.7	.2	-.3	.1	.2	.5	(RF)	(RF)	(RF)	-.2	.0	-.1	.0	-.2	-.3	.2	.7	.7	.5	.1	.1	.1	.2	1.0
26	.3	.4	.4	.3	.2	.0	.1	.0	.0	-.1	-.1	-.1	-.1	-.7	-.7	-.6	-.6	-.6	-.6	-.6	-.5	-.3	-.3	-.4	-.2	.4
27	-.5	-.5	-.5	-.5	-.5	-.4	.1	-.5	.2	-.6	-.7	-.8	-.7	-.8	-.7	-.8	-.6	.1	.6	.2	.5	.9	.8	1.2	-.2	1.2
28	.6	.8	1.7	1.8	2.2	1.5	1.5	1.6	1.6	.3	.1	-.3	-.5	-.6	-.5	-.5	-.3	.5	1.0	.9	1.0	1.5	1.1	1.0	.8	2.2
29	.3	.8	.2	-.2	-.3	-.3	-.2	-.3	-.3	-.5	-.7	-.7	-.6	-.5	-.5	-.3	.1	-.1	.2	-.2	.5	.1	.3	-.1	-.1	.8
30	-.2	.1	.0	.0	.0	.2	.5	1.1	.8	1.1	-.2	-.5	-.6	-.6	-.5	-.6	-.3	.1	1.2	.3	-.1	.9	1.0	1.1	.2	1.2
31	1.1	.3	.9	.5	.7	1.1	.6	-.1	-.4	-.6	-.6	-.7	-.7	-.6	-.6	-.6	-.6	-.6	(RF)	(RF)	(RF)	(RF)	(RF)	(RF)	-.0	1.1
AV	.2	.2	.3	.2	.2	.2	.3	.2	.1	-.2	-.5	-.6	-.6	-.6	-.6	-.5	-.4	-.3	.0	.1	.1	.2	.2	.2	-.1	( )
SD	.7	.6	.7	.8	.8	.7	.7	.7	.7	.6	.4	.3	.3	.2	.2	.2	.2	.3	.5	.6	.6	.6	.7	.7	.3	( )

AQOUT (15 MAY 78)

DAILY AVERAGES SUMMARY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

JAN, 1978

AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 17/JUL/78   *
*                    *
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DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	WS2 M/S 10M	WD2 DEG 10M	WS3 M/S 30M	WD3 DEG 30M	WS4 M/S 60M	WD4 DEG 60M	BWS1 M/S 10M	BHD1 DEG 10M	BVD1 DEG 10M	BWS3 M/S 60M	BHD3 DEG 60M	BVD3 DEG 60M
1	1	235	1	*	1	225	*	*	*	*	*	*
2	1	230	2	210	2	170	*	*	*	*	*	*
3	3	170	4	160	4	180	*	*	*	*	*	*
4	3	190	4	180	5	185	*	*	*	*	*	*
5	5	190	6	185	7	220	*	*	*	*	*	*
6	1	215	5	205	5	220	*	*	*	*	*	*
7	1	170	2	185	2	210	*	*	*	*	*	*
8	2	155	2	160	3	210	*	*	*	*	*	*
9	3	180	3	210	4	195	*	*	*	*	*	*
10	2	170	3	175	3	175	*	*	*	*	*	*
11	2	230	3	220	3	230	*	*	*	*	*	*
12	2	*	2	235	2	235	*	*	*	*	*	*
13	2	180	2	180	2	190	*	*	*	*	*	*
14	2	225	3	165	3	180	4	*	30	4	*	*
15	3	190	4	185	4	190	5	*	25	4	*	*
16	3	195	3	225	4	200	4	*	10	8	*	*
17	2	200	3	200	3	215	3	*	15	11	*	*
18	2	270	2	300	3	260	3	*	10	10	*	*
19	2	155	3	160	3	155	3	*	15	11	*	*
20	1	205	2	240	1	255	2	*	5	5	*	*
21	1	180	2	160	2	165	1	*	15	1	*	*
22	3	180	4	175	5	185	6	*	30	5	*	*
23	3	210	4	205	4	210	6	*	25	5	*	*
24	2	250	2	245	2	265	4	*	30	3	*	*
25	2	165	3	170	3	195	5	*	30	5	*	*
26	4	190	6	190	5	210	6	*	30	6	*	*
27	2	185	3	195	3	205	4	*	15	4	*	*
28	2	155	3	155	3	165	*	*	*	*	*	*
29	3	195	3	185	3	195	*	*	*	*	*	*
30	1	175	2	185	1	200	*	*	*	*	*	*
31	2	175	3	155	3	180	*	*	*	*	*	*
AV	2	195	3	195	3	205	*	*	*	*	*	*

* INDICATES NOT ENOUGH DATA FOR AVERAGE

AQMAR (04 MAY 78)

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DAILY AVERAGES SUMMARY REPORT
                                                        C-B OIL SHALE PROJECT, COLORADO       *********************
                                                                                              *                   *
                                                        SITE   23                             *    FINAL DATA     *
                                                                                              *  AS OF 17/JUL/78  *
                                                        JAN, 1978                             *                   *
                                                                                              *********************
                                                        AEROVIRONMENT INC.


                          DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
                                         (75% FOR TEMP AND REL HUMIDITY)

                    DAY   BST1      BST3      BSP1      BSP3      STH2      STH3      STH4
                        DEG       DEG       DEG       DEG       DEG       DEG       DEG
                            10M       60M       10M       60M       10M       30M       60M

                      1     *         *         *         *         *         *         *
                      2     *         *         *         *         *         *         *
                      3     *         *         *         *         *         *         *
                      4     *         *         *         *         *         *         *
                      5     *         *         *         *         *         *         *
                      6     *         *         *         *         *         *         *
                      7     *         *         *         *         *         *         *
                      8     *         *         *         *         *         *         *
                      9     *         *         *         *         *         *         *
                     10     *         *         *         *         *         *         *
                     11     *         *         *         *         *         *         *
                     12     *         *         *         *         *         *         *
                     13     *         *         *         *         *         *         *
                     14     8         3         7         *         *         *        13
                     15     2         2         5         *         *         *         7
                     16     3         3         4         *         *         *         9
                     17     1         0         5         *         *         *         7
                     18     0         1         3         *         *         *         5
                     19     1         0         3         *         *         *         5
                     20     0         0         2         *         *         *         4
                     21     5         5         3         *         *         *         8
                     22     2         0         5         *         *         *         5
                     23     3         2         5         *         *         *         6
                     24     0         1         4         *         *         *         9
                     25     4         1         6         *         *         *         8
                     26     1         0         6         *         *         *         6
                     27     2         0         4         *         *         *         7
                     28     *         *         *         *         *         *         *
                     29     *         *         *         *         *         *         *
                     30     *         *         *         *         *         *         *
                     31     *         *         *         *         *         *         *

                     AV     *         *         *         *         *         *         *

      * INDICATES NOT ENOUGH DATA FOR AVERAGE
AQMAR  (04 MAY 78)
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DAILY AVERAGES SUMMARY REPORT

C-H OIL SHALE PROJECT, COLORADO

SITE 23

JAN, 1978

AEROVIRONMENT INC.

FINAL DATA
AS OF 15/AUG/78

DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	NOX UGM/M**3	NO2 UGM/M**3	NO UGM/M**3	SO2 UGM/M**3	H2S UGM/M**3	O3 UGM/M**3	THC UGM/M**3	HC UGM/M**3	CH4 UGM/M**3	CO MGM/M**3
1	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*
6	*	*	*	0	0	45	*	*	*	*
7	*	*	*	0	0	45	*	*	*	*
8	*	*	*	0	0	50	*	*	*	*
9	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*
12	*	*	*	*	*	*	*	*	*	*
13	15	0	10	0	0	65	*	*	*	*
14	10	0	5	5	0	70	*	*	*	*
15	0	0	0	5	0	50	*	*	*	*
16	0	0	0	5	0	60	*	*	*	*
17	0	0	0	5	0	55	*	*	*	*
18	15	10	5	5	0	55	*	*	*	*
19	0	0	0	5	0	65	*	*	*	*
20	0	0	0	5	0	55	*	*	*	*
21	0	0	0	5	0	60	*	*	*	*
22	0	0	0	5	0	70	*	*	*	*
23	0	0	0	0	0	65	*	*	*	*
24	0	0	0	0	0	70	*	*	*	*
25	0	0	0	*	0	*	*	*	*	*
26	0	0	0	0	0	75	*	*	*	*
27	0	0	0	*	5	*	*	*	*	*
28	*	*	*	*	*	*	*	*	*	*
29	*	*	*	*	*	*	*	*	*	*
30	*	*	*	*	*	*	*	*	*	*
31	*	*	*	*	*	*	*	*	*	*
AV	*	*	*	5	0	60	*	*	*	*

* INDICATES NOT ENOUGH DATA FOR AVERAGE

ADMAR [15 AUG 78]

DAILY AVERAGES SUMMARY REPORT

C-B OIL SHALE PROJECT, COLORADO

SITE 23

JAN, 1978

AEROVIRONMENT INC.

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*                    *
*     FINAL DATA     *
*  AS OF 19/JUL/78   *
*                    *
**********************
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DAILY AVERAGES (REQUIRE 50% MINIMUM AVERAGES)
(75% FOR TEMP AND REL HUMIDITY)

DAY	TEM2 DEGC 10M	TEM3 DEGC 30M	TEM4 DEGC 60M	RH1 PER 1M	BARP MM HG	SOLR LY	DT2 DEGC 60-10M
1	3	*	*	80	*	*	.4
2	3	*	*	*	*	*	.7
3	8	*	*	*	*	*	-.2
4	9	*	*	78	*	*	-.2
5	10	*	*	70	*	*	-.3
6	9	*	*	77	585	1	-.3
7	7	*	*	73	589	6	.3
8	9	*	*	57	591	7	.2
9	11	*	*	45	*	*	-.2
10	10	*	*	80	*	*	-.4
11	10	*	*	81	*	*	-.1
12	7	*	*	85	*	*	.3
13	8	*	*	66	603	10	.3
14	9	*	*	62	599	6	-.1
15	10	*	*	80	591	3	-.4
16	8	*	*	81	596	6	-.2
17	9	*	*	83	594	4	-.4
18	8	*	*	89	598	3	-.5
19	7	*	*	79	597	3	.2
20	7	*	*	87	596	*	-.4
21	7	*	*	76	599	*	-.2
22	7	*	*	69	599	*	-.3
23	5	*	*	84	594	*	-.6
24	2	*	*	80	597	*	-.4
25	*	*	*	67	599	*	.2
26	*	*	*	74	598	*	-.2
27	6	*	*	73	*	*	-.2
28	8	*	*	56	*	*	.8
29	9	*	*	58	*	*	-.1
30	9	*	*	69	*	*	.2
31	9	*	*	77	*	*	.0
AV	8	*	*	74	596	*	-.1

* INDICATES NOT ENOUGH DATA FOR AVERAGE

AQMAR (04 MAY 78)

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STABILITY CLASS REPORT                                                                   PAGE:   1
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                   C-8 OIL SHALE PROJECT, COLORADO     *********************
                                                                                       *                   *
                                                   SITE   23                           *     FINAL DATA    *
                                                                                       *  AS OF 19/JUL/78  *
                                                   JAN, 1978                           *                   *
                                                                                       *********************
                                                   AEROVIRONMENT INC.


                                    CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

  1    F    F    F    F    F    E    F    F    F    E    D    C    C    C    C    D    D    E    E    E    E    F    F    F
  2    F    F    F    F    F    F    F    F    F    F    F    E    E    E    E    E    E    D    D    D    D    D    D    D
  3    E    E    E    E    E    E    D    D    D    D    D    D    D    D    D    D    D    D    D    D    E    E    E    E
  4    E    E    D    D    E    E    E    D    E    D    D    D    D    D    D    D    D    D    D    E    E    E    E    E
  5    D    D    D    E    E    D    E    E    E    D    D    D    D    D    D    D    D    D    E    E    D    D    D    D
  6    D    D    E    D    D    D    D    D    D    D    E    D    D    D    D    D    D    D    D    D    E    E    E    E
  7    F    F    E    E    E    E    F    F    F    D    C    D    D    D    C    D    D    E    F    F    F    F    F    F
  8    E    F    E    F    F    F    F    F    F    E    D    D    D    D    D    D    D    D    E    E    E    E    E    D
  9    D    E    E    E    E    E    E    D    D    D    D    D    D    D    D    D    D    E    E    E    D    E    E    E
 10    D    D    D    D    D    D    E    D    D    D    D    D    D    D    D    D    E    D    E    E    E    D    E    D
 11    D    D    E    E    D    D    D    D    D    D    D    D    D    D    D    D    E    E    E    F    F    E    F    F
 12    F    F    E    F    E    F    F    E    F    E    D    D    D    D    E    D    D    D    E    D    E    E    F    F
 13    E    E    E    E    E    E    E    E    E    E    D    D    D    D    D    D    D    E    E    F    F    F    F    F
 14    F    E    F    F    E    E    E    D    E    D    D    D    D    D    D    D    D    D    D    D    D    E    E    D
 15    E    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D
 16    D    D    D    D    D    D    E    F    F    E    D    D    D    D    D    D    D    E    E    D    D    D    D    D
 17    D    D    E    E    D    D    E    E    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D    D
 18    D    D    D    D    D    D    D    D    D    D    D    B    A    D    D    D    D    D    D    E    E    D    D    D
 19    F    F    F    F    F    F    F    E    E    D    D    D    D    D    D    D    D    D    E    D    D    E    D    E
 20    E    E    E    E    E    E    D    D    E    D    D    D    D    C    D    C    D    D    D    D    D    D    D    D
 21    D    D    D    D    D    D    D    D    D    D    C    C    C    D    D    D    D    D    E    F    F    E    E    E
 22    E    E    E    E    E    E    F    E    E    D    C    D    D    C    C    D    D    D    D    D    D    D    D    D
 23    D    D    D    D    D    D    E    E    D    D    C    C    D    D    C    D    D    D    D    D    D    D    C    C
 24    C    C    C    C    C    C    C    D    C    A    A    A    A    C    B    C    D    D    E    F    F    F    F    F
 25    E    F    E    E    D    E    E    E (RF) (RF) (RF)    E    D    D    E    D    D    E    E    E    E    E    E    E
 26    E    E    E    E    E    E    E    D    E    E    D    D    D    D    D    D    D    D    D    D    D    D    D    D
 27    D    D    D    D    D    D    E    D    E    D    D    C    D    C    D    C    D    E    D    E    E    F    F    F
 28    E    F    F    F    F    F    F    F    F    E    E    D    D    D    D    D    D    E    F    F    F    F    F    F
 29    E    F    E    E    D    D    E    D    D    D    D    D    D    D    D    D    D    E    E    E    E    E    E    E
 30    E    E    E    E    E    E    E    F    F    F    E    D    D    D    D    D    D    E    F    E    E    F    F    F
 31    F    E    F    F    E    F    E    E    D    D    D    D    D    D    D    D    D    D (RF) (RF) (RF) (RF) (RF) (RF)

  *  INDICATES STABILITY CLASS WITHOUT THE WIND SPEED VALUE

 ADSCR   (05 APR 78)                                                   WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                  PAGE:  2
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                          C-B OIL SHALE PROJECT, COLORADO     *********************
                                                                                              *                   *
                                                          SITE   23                           *    FINAL DATA     *
                                                                                              *  AS OF 19/JUL/78  *
                                                          JAN, 1978                           *                   *
                                                                                              *********************
                                                          AEROVIRONMENT INC.


                                     HOURLY WIND SPEED AND DIRECTION FOR
                                              STABILITY CLASS  A
                                     CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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STABILITY CLASS REPORT                                                                       PAGE:   3
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                   C-B OIL SHALE PROJECT, COLORADO     **********************
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                                                   SITE   23                           *     FINAL DATA     *
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                                                   AEROVIRONMENT INC.


                                  HOURLY WIND SPEED AND DIRECTION FOR
                                         STABILITY CLASS  A
                                  CLOCK HOUR   [LOCAL STANDARD TIMES]

DAY   00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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        STABILITY CLASS REPORT                                                                          PAGE:   4
        STABILITY DETERMINED FROM
        DELTA T #2( TEMP @60M - TEMP @10M)
                                                                 C-B OIL SHALE PROJECT, COLORADO        *********************
                                                                                                        *                   *
                                                                 SITE   23                              *     FINAL DATA    *
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                                                                 JAN, 1978                              *                   *
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                                                                 AEROVIRONMENT INC.


                                              HOURLY WIND SPEED AND DIRECTION FOR
                                                     STABILITY CLASS  B
                                              CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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          STABILITY CLASS REPORT                                                      PAGE:   5
          STABILITY DETERMINED FROM
          DELTA T #2( TEMP @60M - TEMP @10M)
                                                             C-8 OIL SHALE PROJECT, COLORADO        *********************
                                                                                                    *                   *
                                                             SITE   23                              *     FINAL DATA    *
                                                                                                    *  AS OF 19/JUL/78  *
                                                             JAN, 1978                              *                   *
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                                                             AEROVIRONMENT INC.



                                        HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  B
                                        CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY   00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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STABILITY CLASS REPORT                                                                                    PAGE:   6
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                                 C-B OIL SHALE PROJECT, COLORADO          *********************
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                                                                 SITE   23                                *    FINAL DATA     *
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                                                                 JAN, 1978                                *                   *
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                                                                 AEROVIRONMENT INC.


                                              HOURLY WIND SPEED AND DIRECTION FOR
                                                    STABILITY CLASS  C
                                              CLOCK HOUR    (LOCAL STANDARD TIMES)

DAY  00   01   02   03   04   05   06   07   08   09   10   11   12   13   14   15   16   17   18   19   20   21   22   23

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 13 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 16 [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
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 AQSCR  (05 APR 78)                                                                            WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                              PAGE:   7
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                                 C-8 OIL SHALE PROJECT, COLORADO     **********************
                                                                                                     *                    *
                                                                 SITE   23                           *     FINAL DATA     *
                                                                                                     *  AS OF 19/JUL/78   *
                                                                 JAN, 1978                           *                    *
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                                                                 AEROVIRONMENT INC.


                                              HOURLY WIND SPEED AND DIRECTION FOR
                                                   STABILITY CLASS  C
                                              CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY  00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

17 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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18 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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19 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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20 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3 [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW [   ]     N [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
21 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   ESE   NNW   NNE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
22 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4 [   ] [   ]     5     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S [   ] [   ]     S   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
23 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ] [   ]     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     4
   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   NNE   NNW [   ] [   ]   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW    NW
24     4     4     5     4     2     3     2 [   ]     2 [   ] [   ] [   ] [   ]     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
      NW   WNW    NW    NW    NW   WNW     W [   ]   WNW [   ] [   ] [   ] [   ]    NW [   ]   NNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
25 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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26 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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27 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ]     4 [   ]     4 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SE [   ]   SSW [   ]    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
28 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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29 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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30 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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31 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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 AQSCR  (05 APR 78)                                                                        WIND SPEED: M/S
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STABILITY CLASS REPORT
STABILITY DETERMINED FROM
DELTA T #2(TEMP @60M - TEMP @10M)

C-B OIL SHALE PROJECT, COLORADO

SITE 23

JAN, 1978

AEROVIRONMENT INC.

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*                     *
*     FINAL DATA      *
*   AS OF 19/JUL/78   *
*                     *
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HOURLY WIND SPEED AND DIRECTION FOR
STABILITY CLASS D
CLOCK HOUR (LOCAL STANDARD TIMES)

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DAY     00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     1[    ][    ][    ][    ]     1     2[    ][    ][    ][    ][    ][    ][    ]
    [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]    NW[    ][    ][    ][    ]   WNW    NW[    ][    ][    ][    ][    ][    ][    ]
  2 [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     2     2     2     1     2     2     1
    [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     S     S   SSW   SSW     S   SSE   SSE
  3 [    ][    ][    ][    ][    ][    ]     2     2     3     2     2     4     4     4     5     8     7     6     2     2[    ][    ][    ][    ]
    [    ][    ][    ][    ][    ][    ]     S    SW   SSE    SE   SSW    SW    SW    SW    SW   SSW   SSW   SSW   ESE     E[    ][    ][    ][    ]
  4 [    ][    ]     1     2[    ][    ][    ]     2[    ]     6     6     6     5     6     5     4     6     7     5[    ][    ][    ][    ][    ]
    [    ][    ]   SSE    SE[    ][    ][    ]    SW[    ]    SW    SW    SW   SSW   SSW   SSW   SSW   SSW   SSW   SSW[    ][    ][    ][    ][    ]
  5      4     8     4[    ][    ]     3[    ][    ][    ]     5     5     7     7     8     6     4     3     3[    ][    ]     7     9     8     7
         S   SSW     S[    ][    ]   SSW[    ][    ][    ]   SSW   SSW   SSW   SSW   SSW     S   SSW     S     S[    ][    ]     S     S     S     S
  6      0     1[    ]     0     1     1     2     2     2     1[    ]     2     1     1     1     1     1     0     3     4[    ][    ][    ][    ]
         S     S[    ]     S     S     S     S   SSW   SSW   SSW[    ]   SSW    SW   WSW  [IM]  [IM]  [IM]    NW   WNW     W[    ][    ][    ][    ]
  7 [    ][    ][    ][    ][    ][    ][    ][    ][    ]     1[    ]     2     1     1[    ]     1     2[    ][    ][    ][    ][    ][    ][    ]
    [    ][    ][    ][    ][    ][    ][    ][    ][    ]    SE[    ]    SW   NNE   NNE[    ]    SW    SW[    ][    ][    ][    ][    ][    ][    ]
  8 [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     1     2     4     4     4     4     4     3[    ][    ][    ][    ][    ]     1
    [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]    NE   NNW   SSW   SSW     S     S     S   SSE[    ][    ][    ][    ][    ]    SE
  9      2[    ][    ][    ][    ][    ][    ]     2     3     2     3     4     4     5     5     4     3[    ][    ][    ]     2[    ][    ][    ]
       SSE[    ][    ][    ][    ][    ][    ]     S   SSE    SE     S   SSW    SW    SW   SSW   SSW   SSW[    ][    ][    ]     S[    ][    ][    ]
 10      3     2     3     4     4     2[    ]     3     2     2     4     5     4     4     2     2[    ]     1[    ][    ][    ]     1[    ]     2
       SSE    SE     S     S     S     S[    ]     S     S     S   SSW   SSW   SSW   SSW   SSW    SW[    ]    NE[    ][    ][    ]   SSW[    ]    SW
 11      2     3[    ][    ]     3     3     1     1     1     1     3     3     2     2     2     2[    ][    ][    ][    ][    ][    ][    ][    ]
        SW    SW[    ][    ]   SSW  [VA]    NE    SE     S   SSE   SSW    SW    NW    NW    NW    NW[    ][    ][    ][    ][    ][    ][    ][    ]
 12 [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     2     3     4     4[    ]     4     3     1[    ]     2[    ][    ][    ][    ]
    [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]   WSW  [VA]    SW    SW[    ]    NW   NNW  [VA][    ]     N[    ][    ][    ][    ]
 13 [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]     1     1     2     1     1     2     4[    ][    ][    ][    ][    ][    ][    ]
    [    ][    ][    ][    ][    ][    ][    ][    ][    ][    ]    NE    NW    SW  [VA]   SSW    SW   SSW[    ][    ][    ][    ][    ][    ][    ]
 14 [    ][    ][    ][    ][    ][    ][    ]     3[    ]     3     4     4     5     4     3     3     3     2     4     3     2[    ][    ]     2
    [    ][    ][    ][    ][    ][    ][    ]     S[    ]     S     S     S   SSW    SW   SSW   SSW   SSW   SSE   SSE   SSE    SE[    ][    ]     N
 15 [    ]     3     3     3     2     2     3     3     2     2     4     6     6     7     4     2     2     1     1     1     0     0     3     2
    [    ]     S   SSE     S   SSE     E    SE    SE    SE    SE     S   SSW   SSW     S   SSW   SSW   SSE   SSW    SW    SW     W     W    NW   WNW
 16      3     3     1     1     1     1[    ][    ][    ][    ]     3     4     6     5     6     4     3[    ][    ]     4     1     3     2     2
       WNW   NNW    NW     W     S    SE[    ][    ][    ][    ]   SSW   SSW   SSW   SSW   SSW   SSW   SSE[    ][    ]    SE   SSW     S   SSE   SSE
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AQSCR (05 APR 78)

WIND SPEED: M/S

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STABILITY CLASS REPORT                                                                          PAGE:   9
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                    C-B OIL SHALE PROJECT, COLORADO        **********************
                                                                                           *                    *
                                                    SITE   23                              *     FINAL DATA     *
                                                                                           *   AS OF 19/JUL/78  *
                                                    JAN, 1978                              *                    *
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                                                    AEROVIRONMENT INC.


                                      HOURLY WIND SPEED AND DIRECTION FOR
                                               STABILITY CLASS  D
                                      CLOCK HOUR    (LOCAL STANDARD TIMES)


DAY     00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

 17      1     1 [   ] [   ]     2     2 [   ] [   ]     1     2     4     5     3     4     4     4     1     0     0     0     1     1     1     2
        SE    SE [   ] [   ]    SE    SE [   ] [   ]    SE   SSW    SW    SW   SSW    SW    SW     W   WSW   WSW   WSW    SW   WSW   WSW    SW     W
 18      2     2     1     1     1     1     2     2     2     2     1 [   ] [   ]     3     3     3     2     2     1 [   ] [   ]     1     2     2
         W     W   WNW     W   WNW   WNW   WNW    NW    NW   WNW    NW [   ] [   ]   NNW    NW    NW   WNW   WNW   NNW [   ] [   ]    SE   SSE    SE
 19  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3     3     4     3     4     4     3     2     2 [   ]     1     1 [   ]     1 [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   ESE   SSE     S     S     S     S   SSW     S    SE [   ]    SE    SE [   ]     E [   ]
 20  [   ] [   ] [   ] [   ] [   ] [   ]     0     0 [   ]     0     1     2     2 [   ]     3 [   ]     2     0     1     1     1     1     1     1
     [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSE [   ]    SW    SW   NNE   NNW [   ]   NNW [   ]     N   NNW    NW   WNW   WSW   WSW     W    SW
 21      0     0     0     0     0     0     0     0     1     1 [   ] [   ] [   ]     1     1     0     1     1 [   ] [   ] [   ] [   ] [   ] [   ]
        SW   SSW    SW     W     W   SSW     E    SE   SSE   SSE [   ] [   ] [   ]     N    NE   SSE   NNE   WNW [   ] [   ] [   ] [   ] [   ] [   ]
 22  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ]     5     5 [   ] [   ]     5     4     4     4     3     3     2     2     2
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S [   ]   SSW   SSW [   ] [   ]   SSW     S    S.     S   SSE     S     S    SE   SSE
 23      2     4     4     3     2     2 [   ] [   ]     2     1 [   ] [   ]     2     4 [   ]     4     4     4     3     4     4     5 [   ] [   ]
       SSE     S   SSE    SE   ESE    SE [   ] [   ]     E     E [   ] [   ]   NNE    NW [   ]    NW    NW    NW    NW   WNW    NW    NW [   ] [   ]
 24  [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WNW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WSW   SSW [   ] [   ] [   ] [   ] [   ] [   ]
 25  [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     7     6 [   ]     7     7 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S     S [   ]     S     S [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 26  [   ] [   ] [   ] [   ] [   ] [   ] [   ]    10 [   ] [   ]    11     9     8     5     4     4     4     4     1     1     1     1     3     3
     [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S [   ] [   ]     S    S-     S     S   SSW   SSW   SSW    SW     S   SSW   SSW    SW    SW   WSW
 27      3     1     0     0     1     0 [   ]     1 [   ]     2     2 [   ]     3 [   ]     4 [   ]     4 [   ]     5 [   ] [   ] [   ] [   ] [   ]
       WNW   WNW   SSW     W   NNW   ENE [   ]    SW [   ]   SSE    SE [   ]   SSE [   ]   SSW [   ]   SSW [   ]     S [   ] [   ] [   ] [   ] [   ]
 28  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     3     2     3     3     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW    SW    SW    SW   SSW     S [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 29  [   ] [   ] [   ] [   ]     2     2 [   ]     1     3     2     3     4     4     4     4     5     7 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ]     S     S [   ]  [VA]     S   SSW   SSW   SSW   SSW   SSW   SSW    SW    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 30  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     1     1     2     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     N   NNE   NNW    NW   ENE   ESE [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 31  [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     3     3     3     2     1     2     3     3     4 [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE     S   SSW   SSW    SW     N   ENE     S   SSW   SSW [   ] [   ] [   ] [   ] [   ] [   ]

 AQSCR  (05 APR 78)                                                                   WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                  PAGE: 10
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                 C-B OIL SHALE PROJECT, COLORADO        **********************
                                                                                        *                    *
                                                 SITE   23                              *     FINAL DATA     *
                                                                                        *  AS OF 19/JUL/78   *
                                                 JAN, 1978                              *                    *
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                                                 AEROVIRONMENT INC.


                                    HOURLY WIND SPEED AND DIRECTION FOR
                                            STABILITY CLASS  E
                                    CLOCK HOUR   (LOCAL STANDARD TIMES)

DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  1 [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ]     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     1     1     1 [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ]    SW [   ] [   ] [   ]  [VA] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   WNW   WSW    SW   SSW [   ] [   ] [   ]
  2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     1     1     1     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW   NNW     N    NW   SSW    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  3     3     3     2     1     1     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     2     2     1
       SE   SSE  [VA]  [VA]    SE   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   ESE   ENE    SE  [VA]
  4     1     1 [   ] [   ]     1     1     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     2     3     3     3
       NW     E [   ] [   ]   ESE   ESE   ESE [   ]    NW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW     S     S    SE  [VA]
  5 [   ] [   ] [   ]     2     2 [   ]     2     2     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     4 [   ] [   ] [   ] [   ]
    [   ] [   ] [   ]   SSE     S [   ]  [VA]     S   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW [   ] [   ] [   ] [   ]
  6 [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     1     1     1
    [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW    SW     S     S
  7 [   ] [   ]     1     1     1     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ]
    [   ] [   ]   SSW     S   SSE   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SW [   ] [   ] [   ] [   ] [   ] [   ]
  8     1 [   ]     0 [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     2     2     3     1 [   ]
      ENE [   ]   SSE [   ] [   ] [   ] [   ] [   ] [   ]     E [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]  [VA]    SE    SE   SSE    SE [   ]
  9 [   ]     2     2     3     2     1     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     3     3     1 [   ]     1     2     2
    [   ]    SW     S     S    SE  [VA]   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE   SSE  [VA] [   ]   SSW     S   SSE
 10 [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ]     1     2     2 [   ]     1 [   ]
    [   ] [   ] [   ] [   ] [   ] [   ]   ESE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     N [   ]    SE   SSE     S [   ]   SSW [   ]
 11 [   ] [   ]     2     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     1 [   ] [   ]     1 [   ] [   ]
    [   ] [   ]    SW    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    NW  [IM]  [IM] [   ] [   ]  [IM] [   ] [   ]
 12 [   ] [   ]     1 [   ]     2 [   ] [   ]     1 [   ]     1 [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ]     0 [   ]     1     1 [   ] [   ]
    [   ] [   ]  [IM] [   ]  [IM] [   ] [   ]  [IM] [   ]  [IM] [   ] [   ] [   ] [   ]   NNW [   ] [   ] [   ]  [VA] [   ]   WSW     S [   ] [   ]
 13     1     1     1     1     1     1     1     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4     3 [   ] [   ] [   ] [   ] [   ]
      SSW   SSW    SW   SSW    SW   WNW   SSW    SW    SE     E [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW [   ] [   ] [   ] [   ] [   ]
 14 [   ]     1 [   ] [   ]     2     1     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ]
    [   ]    SE [   ] [   ]    SE   ESE    SE [   ]   ESE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE     N [   ]
 15     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
        E [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
 16 [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ]     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     2 [   ] [   ] [   ] [   ] [   ]
    [   ] [   ] [   ] [   ] [   ] [   ]     S [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ]     E     E [   ] [   ] [   ] [   ] [   ]

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STABILITY CLASS REPORT                                                                          PAGE: 11
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                          C-B OIL SHALE PROJECT, COLORADO      *********************
                                                                                               *                   *
                                                          SITE   23                            *    FINAL DATA     *
                                                                                               *  AS OF 19/JUL/78  *
                                                          JAN, 1978                            *                   *
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                                                          AEROVIRONMENT INC.


                                         HOURLY WIND SPEED AND DIRECTION FOR
                                                STABILITY CLASS  E
                                         CLOCK HOUR   (LOCAL STANDARD TIMES)


 DAY    00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

  17 [   ] [   ]     1     2 [   ] [   ]     2     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ]   ESE    SE [   ] [   ]    SE    SE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  18 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     E    SE [   ] [   ] [   ]
  19 [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ]     1 [   ]     1
     [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE    SE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]    SE [   ] [   ]   ESE [   ]     E
  20     1     1     1     0     0     0 [   ] [   ]     0 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
         E   ESE    SE   ESE   ESE   ESE [   ] [   ]   SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  21 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ] [   ]     1     1     0
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW [   ] [   ]   WSW   ENE    SE
  22     1     2     2     3     2     2 [   ]     4     2 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
       ESE     S   SSW   SSW   SSW   SSW [   ]     S   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  23 [   ] [   ] [   ] [   ] [   ] [   ]     2     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ]   ESE     E [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  24 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S [   ] [   ] [   ] [   ] [   ]
  25     1 [   ]     1     1 [   ]     1     1     3 [   ] [   ] [   ]     4 [   ] [   ]     4 [   ] [   ]     0     1     1     0     0     0     1
         S [   ]    SE    SE [   ]   ESE   SSE     S [   ] [   ] [   ]   SSE [   ] [   ]   SSW [   ] [   ]     S     S     S     S   SSE    SE     S
  26     4     0     1     0     1     5     4 [   ]     5     5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
         S     S     S     S     S     S     S [   ]     S     S [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  27 [   ] [   ] [   ] [   ] [   ] [   ]     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     4 [   ]     3     2 [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ]    SW [   ]     S [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S [   ]   SSE   ESE [   ] [   ] [   ]
  28     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ] [   ] [   ] [   ] [   ] [   ]     4 [   ] [   ] [   ] [   ] [   ] [   ]
       SSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     E  (VA) [   ] [   ] [   ] [   ] [   ] [   ]     S [   ] [   ] [   ] [   ] [   ] [   ]
  29     2 [   ]     2     1 [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     5     2     1     1     1     1     2
       SSE [   ]    SE    SW [   ] [   ]    NW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW    SW     W   ENE     S   SSE
  30     1     1     1     1     1     1     1 [   ] [   ] [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ]     2 [   ]     1     0 [   ] [   ] [   ]
       WSW    SE   ESE     S   SSE   SSE     S [   ] [   ] [   ]    NW [   ] [   ] [   ] [   ] [   ] [   ]   SSE [   ]     S   ESE [   ] [   ] [   ]
  31 [   ]     1 [   ]     1     1 [   ]     1     3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ]    SE [   ]   ESE  (VA) [   ]   SSE   SSE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]

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STABILITY CLASS REPORT                                                                          PAGE:  12
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                           C-8 OIL SHALE PROJECT, COLORADO     *********************
                                                                                               *                   *
                                                           SITE   23                           *     FINAL DATA    *
                                                                                               *  AS OF 19/JUL/78  *
                                                           JAN, 1978                           *                   *
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                                                           AEROVIRONMENT INC.


                                   HOURLY WIND SPEED AND DIRECTION FOR
                                          STABILITY CLASS  F
                                   CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY     00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

   1     0     1     1     1     1 [   ]     0     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1     1
        NE  [VA]  [VA]    SW     S [   ]  [VA]     S    SW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSE   SSE    SW
   2     1     1     1     1     1     2     1     1     0     0     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
         E   NNW     W    SW   SSW   SSW  [VA]  [VA]   SSW     W   WSW [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   3 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   4 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   5 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
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   6 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   7     1     1 [   ] [   ] [   ] [   ]     1     0     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     2     1     2     2     1
        SW   SSW [   ] [   ] [   ] [   ]     S   SSE     S [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]   SSW   SSW   SSE   ESE  [VA]     E
   8 [   ]     1 [   ]     1     1     1     1     1     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ]   SSE [   ]   SSE   SSW    SE     E    SE    SE [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
   9 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  10 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]
  11 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     1     1 [   ]     2     2
     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]  [IM]  [IM] [   ]  [IM]  [IM]
  12     1     1 [   ]     1 [   ]     2     1 [   ]     1 [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     2     2
      [IM]  [IM] [   ]  [IM] [   ]  [IM]  [IM] [   ]  [IM] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     S   SSW
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     [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ] [   ]     E   ESE   ESE     E   ESE
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 AQSCR  (05 APR 78)                                                                   WIND SPEED: M/S
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STABILITY CLASS REPORT                                                                                     PAGE:  13
STABILITY DETERMINED FROM
DELTA T #2( TEMP @60M - TEMP @10M)
                                                            C-B OIL SHALE PROJECT, COLORADO         **********************
                                                                                                    *                    *
                                                            SITE   23                               *     FINAL DATA     *
                                                                                                    *  AS OF 19/JUL/78   *
                                                            JAN, 1978                               *                   -*
                                                                                                    **********************
                                                            AEROVIRONMENT INC.


                                          HOURLY WIND SPEED AND DIRECTION FOR
                                                 STABILITY CLASS  F
                                          CLOCK HOUR   (LOCAL STANDARD TIMES)


DAY   00    01    02    03    04    05    06    07    08    09    10    11    12    13    14    15    16    17    18    19    20    21    22    23

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SUPPLEMENTAL DATA
REPORT

II B SUPPLEMENTAL DATA

No supplements to data reported in previous documents are included.

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BIOLOGY

BIOLOGICAL DEVELOPMENT MONITORING STUDIES

TRACT C-b

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BIOLOGY

STUDY & CATEGORY	METHODOLOGY	RESULTS & DISCUSSION
	Page	Page
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Medium-Sized Mammals	II C-6	II C-7
Small Mammals	II C-6	II C-7
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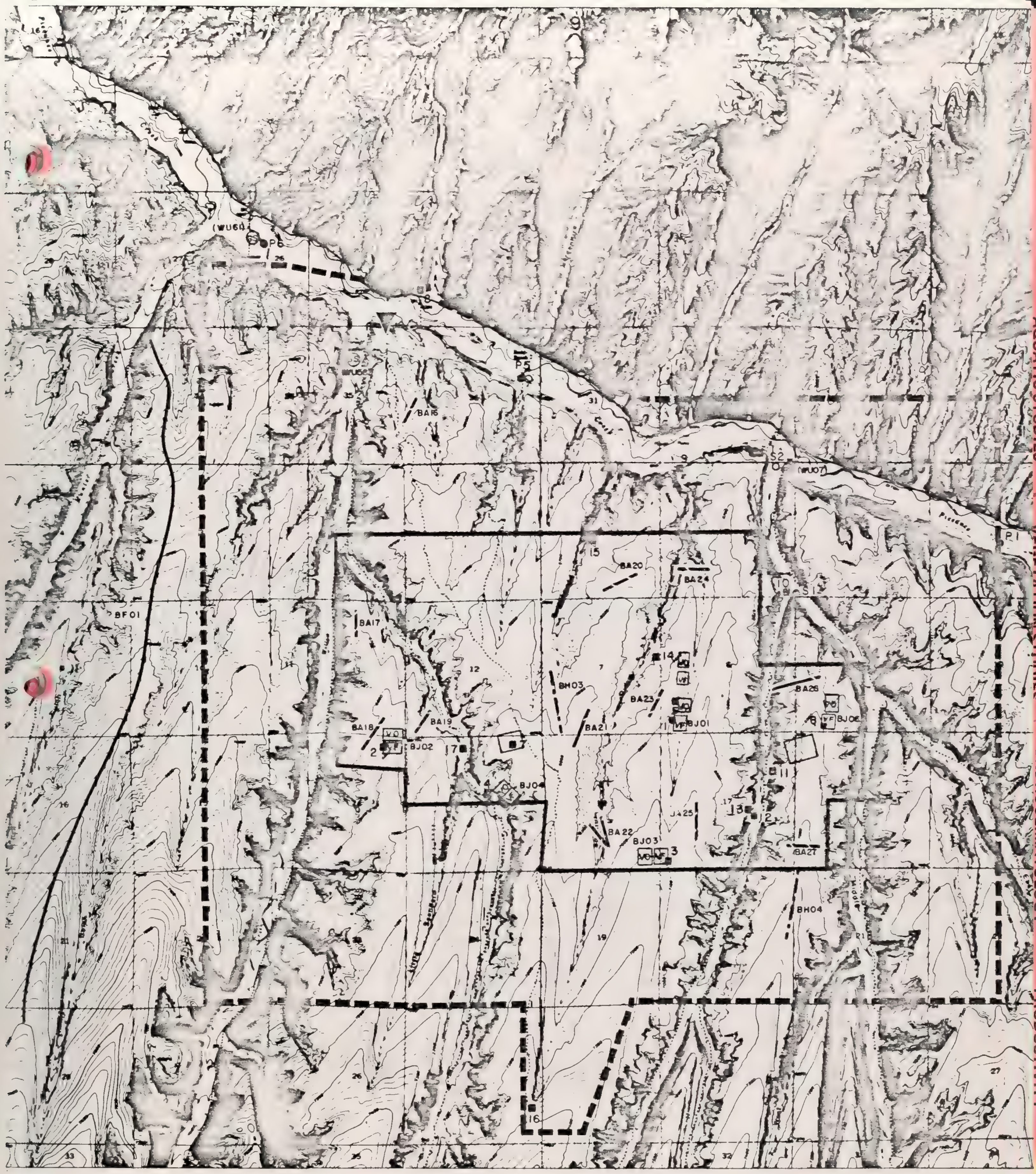

[illegible]ter Gaging Station - Benthos

VO VF Vegetation Site: VO= Open (50 x 70 m)
VF= Fenced (50 x 70 m)

■ Microenvironmental Station

○ Fish Sampling

● Periphyton

Deer Pellet and Browse Utilization Transects

Ornithological Gamebird Study Transects

Predator Survey Lines

▼ Other Sensitive Areas

BIOLOGICAL DEVELOPMENT MONITORING PROGRAM

Figure II C-1

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TERRESTRIAL WILDLIFE STUDIES

II C BIOLOGY

II C-1 TERRESTRIAL WILDLIFE STUDIES

Mammals

Introduction

Data was gathered from September 1, 1977 through November 1, 1978. Discussion of the tabular data contained in this section will be restricted to a brief description of the methods used.

Scope of Work

Pellet group surveys, road counts, road kill counts, mortality transects, age class composition surveys, and shrub production and utilization studies were conducted for mule deer. Lagomorph pellet counts and small mammal trapping were also conducted during the interim monitoring.

Methods

Deer Pellet-Group Studies

Deer pellet groups were counted along 27 transects located in two habitat types, pinyon-juniper and chained rangeland. Pellet groups were cleared from the plots during the Winter and counts were made during the Spring.

Mule Deer Road Counts

Mule deer road counts were conducted in the same manner as during baseline studies. A 41-mile length of road was driven (from Rio Blanco Store to Highway 64) and all deer observed were recorded within one-mile intervals. All counts were made during late evenings.

Road Kills

Mule deer road kill counts were conducted along the same 41 mile length of road as the mule deer road counts. The method used was described in the monitoring plan. The dead deer were aged, sexed and tagged.

Mortality

Mortality transects for mule deer were conducted in draws along Piceance Creek in the Spring. Ten transects were surveyed with all dead deer being recorded according to age and sex. Transect locations can be found in the monitoring plan.

Age Class Composition of Deer

Age class estimates of deer were obtained by observations of deer in the agricultural meadows near Piceance Creek during April and November 1978.

Coyote Abundance

The coyote scent post survey was conducted in September in the same manner as described in the baseline studies.

Lagomorph Abundance

Lagomorph pellet counts were conducted in the same plots which were used for deer pellet counts. Plots were cleared of pellets in fall 1977 and counted in Spring 1978.

Small Mammals

Small mammal trapping and density estimates were conducted in the same manner as baseline sutdies. Four areas were trapped; chained pinyon-juniper, pinyon-juniper, a controlled and a developmental meadow. Trapping was conducted in the Spring and the Fall.

Shrub Production and Utilization

Bitterbrush and mountain mahogany shrub production and utilization was conducted as in baseline studies except no clippings were taken. Shrubs were tagged and measured in the Fall to obtain production and in the Spring to obtain utilization. Methods used are described in the monitoring plan.

Baseline evaluations of the bitterbrush and mountain mahogany on Big Jimmy Ridge were conducted as described in the monitoring plan. Methods were changed from baseline methods due to the heavily browsed condition of the shrubs. The shrubs were measured on the deer day use transects at each of the 20 stakes per transect. Each plot was .04 acre. Bitterbrush was evaluated by shrub density, height, and plant condition. Mountain mahogany data consists of shrub density.

Bitterbrush production for 1978 along all the deer transects located on tract were conducted as in baseline studies. Ten shrubs along each deer transect were tagged and their year's growth was measured.

Bitterbrush and mountain mahogany production was recorded for the fertilized and control areas. Methods were the same as above.

Sagebrush condition and density were conducted as described in the monitoring plan using the BLM ocular estimate technique. All 27 deer transects were surveyed recording age, condition and density of the sagebrush.

Results

Deer Pellet-Group Studies

Mule deer pellet-group densities are presented in Tables II C-1 through II C-4.

Mule Deer Road Counts

Mule deer road count data are presented in Table II C-5 showing large concentrations of deer between Stewart Gulch and the Rock School.

Road Kills

Road kill data are presented in Table II C-6 showing deer killed along the entire length of the 41-mile road.

Mortality

Mortality data are presented in Table II C-7. Analyses of the data are not complete at this time.

Age Class Composition of Deer

Age class composition data of deer wintering near Tract C-b are presented in Table II C-8.

Coyote Abundance

Coyote scent post survey data for 1977 and 1978 are presented in Tables II C-9 and II C-10. The count was lower in 1977 than in 1978.

Lagomorph Abundance

Lagomorph pellet counts are presented in Table II C-11.

Small Mammals

Small mammal trapping data are presented in Table II C-12.

Shrub Production and Utilization

Bitterbrush and mountain mahogany shrub production and utilization data for 1977-1978 are presented in Tables II C-13 through II C-16.

Baseline bitterbrush evaluation data on Big Jimmy Ridge are presented in Table II C-17.

Baseline mountain mahogany data on Big Jimmy Ridge are presented in Table II C-18.

Bitterbrush production data for 1978 are presented in Table II C-19.

Production data of bitterbrush and mountain mahogany treated with fertilizer are presented in Table II C-20.

Sagebrush ocular estimate data for pinyon juniper and sagebrush habitats are presented in Tables II C-21 and II C-22.

Table II C-1

Deer pellet-group densities in the chained rangeland habitat, 1977-78.

Transect	Mean pellet-groups per acre ± SE	No. of 0.01 acre plots
BA 17 (CH-C-1)	235 ± 56	20
BA 18 (CH-C-2)	245 ± 52	20
BA 25 (CH-C-3)	385 ± 62	20
Combined	288 ± 33	60
BA 21 (CH-T-1)	495 ± 67	20
BA 20 (CH-T-2)	535 ± 72	20
BA 23 (CH-T-3)	274 ± 38	19
Combined	437 ± 38	59

Table II C-2

Deer pellet-group densities in the pinyon-juniper habitat, 1977-78.

Transect	Mean pellet-groups per acre ± SE	No. of 0.01 acre plots
BA 19 (PJ-C-1)	360 ± 56	20
BA 26 (PJ-C-2)	110 ± 34	20
BA 27 (PJ-C-3)	245 ± 53	20
Combined	238 ± 31	60
BA 16 (PJ-T-1)	310 ± 77	20
BA 22 (PJ-T-2)	195 ± 38	19
BA 24 (PJ-T-3)	90 ± 16	20
Combined	198 ± 31	59

Table II C-3

Deer pellet-group densities in the chained rangeland habitat on Big Jimmy ridge, 1977-78.

Transect	Mean pellet-groups per acre ± SE	No. of 0.01 acre plots
BA 01	355 ± 60	20
BA 02	420 ± 73	20
BA 03	430 ± 66	20
BA 04	360 ± 41	20
BA 05	580 ± 88	20
BA 06	205 ± 44	20
BA 07	210 ± 69	20
BA 08	415 ± 61	20
BA 09	610 ± 90	20
Combined	398 ± 24	180

Table II C-4

Deer pellet-group densities in the pinyon-juniper habitat north of Piceance Creek, 1977-78.

Transect	Mean pellet-groups per acre ± SE	No. of 0.01 acre plots
BA 10	95 ± 26	20
BA 11	90 ± 22	20
BA 12	130 ± 31	20
Combined	105 ± 15	60
BA 13	345 ± 69	20
BA 14	440 ± 47	20
BA 15	285 ± 48	20
Combined	357 ± 33	60

Table II C-5

MULE DEER ROAD COUNTS CONDUCTED FROM FALL 1977 TO SPRING 1978

	SEPT.		OCT.					NOV.					DEC.				JAN.				FEB.				MAR.					APR.				MAY	MILE
	22	29	6	13	20	24	27	3	10	17	24	31	8	15	21	29	5	12	19	25	2	9	16	23	2	9	16	23	30	6	13	20	27	4	INTERVAL
lanco Store																	2													2					0
																							14	8			26								1
																						1	23	28	3	18	39							2	2
																					2		25	6			21								3
																								9		23	18	1							4
																				1					3		22								5
																						16		16		9	50		3						6
								8	1								6					4	4	19	3	21	42	3	30	7					7
																					21	9	13	31	11	54	37	15		41	5		1		8
																	2				5	3	9	7	7	8	50	14	27		8				9
								8									3					14	51	24			23		6						10
														5							1	8	36	22	1	4	79		12						11
								3	2													26	5	41	1	11	67		20	30					12
							6						5									21	18	13	8	1	21		21						13
							3	15														3	4	8			20		10	8					14
						6	25	5		6						2							10	4			33	3	2						15
						28	28	25	21	8	17						1							5			5	4	12	28					16
						30	101	236	138	8	5											4		20	3	10	15		18		12				17
						115	122	41	60	45	9											3	6			3	43	8	57	42	5	14			18
					8	106	205	96		61			4									3	18			13	22	49	47	82	35	10			19
				14	15	126	150	7	72	57	7		2	23			2						31	13		24	45	25	75						20
						16	18		83	10	6	19	16							4			8	74		61	62	12		21					21
					4	18	51	23		24	10	9	68	34	4	18	12	1		8	2	13	9	23		37	9	81	61	88					22
											5						1			1			3	11		8	13	19	17	20	44	32			23
School							4		21						5	5					6		11	53	2	17	40	39	58	8		12			24
						5	42	24					4		6								13	40		12	27	113	88	135	17				25
						7	9								3									2		7	10	20	40	10	13				26
						5			8	7			6	15										23			21	24	5	95	1	6			27
					3	7									5	3						5	8	18	28	18			25	37					28
																								26	10		55	11	15	37					29
							12						10										20	20	2	18	9	38		4					30
							40	31	13		19	13	15	5		8				5				13	2	7	59	41	14	62		16			31
							3						7	3										3	6	4	2		5	11					32
													1			2								13			5			74				1	33
											4				1								3	2						7					34
																						2	15	7				1	1	6					35
																								11				28		20					36
																							3	17		1	21	24							37
																								3		9	10	11							38
																				5				17	7		13	6		19					39
																										23		48		25		28			40
River City																																			41
	0	0	0	14	30	480	837	498	418	226	75	41	138	85	24	38	29	1	0	24	37	145	360	650	97	421	1034	638	679	919	140	118	1	3	

: On January 5 the Road Count was extended from Mile 34 to Mile 41.

Table II C-6

MULE DEER ROADKILL CONDUCTED FROM FALL 1977 TO SPRING 1978

MILE INTERVAL	OCT.			NOV.			DEC.					JAN.				FEB.				MAR.					APR.				MAY	MILE INTERVAL
	24	27	28	3	10	17	1	8	15	22	29	5	12	19	25	3	9	16	23	2	9	16	23	30	6	13	20	27	4	
0 Rio Blanco Store																														0
1																														1
2			1		1																									2
3																														3
4																														4
5																			1											5
6																														6
7	1					1								1				1	4	3			1							7
8																				1										8
9					1																		1							9
10																*			2							1				10
11		1																			1		1							11
12		1																												12
13																													1	13
14																														14
15															1						1	1								15
16				1																					1					16
17		1		1	1								1			1				2				1						17
18	1																							1		1	1		1	18
19				1														1	1				1	1						19
20	1	1				1						1								1					1	1				20
21			1			1	1	1																	1	1				21
22					1																		1							22
23												1																		23
24 Rock School				1		1																								24
25																	1													25
26																														26
27												1																		27
28																			1											28
29				1																1			1							29
30																														30
31						3						2	1																	31
32																					2									32
33																														33
34													1				1			1										34
35																										1				35
36													1																	36
37														2									1			1				37
38																														38
39															1			1	2											39
40													2								1									40
41 White River City																				1		1								41
TOTAL	3	4	2	5	4	7	1	1	0	0	0	5	6	3	2	2	2	3	11	10	5	2	7	3	3	6	1	0	2	=100

NOTE: Total Kill was * Deer. Figure * One Elk killed was derived from combining DOW data with C-b data.

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Table II C-7

DEER MORTALITY TRANSECTS

SPRING 1978

PLOT NUMBER	FAWN MALE	FAWN FEMALE	MATURE MALE	MATURE FEMALE	UNIDENTIFIED	TOTAL
1		2				2
2	3					3
3			1			1
4			1		1-hunter kill	2
5		2			1-fawn (Les) 3-hunter kill	6
6		1			2-unidentified 2-hunter kill	5
7				1	6-unidentified 1-hunter kill	8
8		1			2-unidentified	3
9	1	1	2		1-unidentified	5
10					1-unidentified	1

Table II C-8

Age class composition of mule deer wintering near Tract C-b.

Date	Fawns	Does	Bucks	Adults	Fawns/ 100 Does	Bucks/ 100 Does	Fawns/ 100 Adults
15-23 Nov. 1977	85	107	28	135	79.4	26.2	63.0
4-7 Apr. 1977	68			104			65.0

Table II C-9

RESULTS OF COYOTE SCENT STATION SURVEY FOR OCTOBER 1977.

Line No.	No. of stations	No. of visits
1. Big Jimmy	25	4
2. SG-9	10	0
3. Scandard	10	0
4. SG-15	10	0
5. SG-11	9	0
6. Stewart (ridge)	15	5
7. Stewart (valley)	10	3
8. Bailey	11	1
	100	13

$$\text{Index} = \frac{\text{No. Visits}}{\text{No. operable stations}} \times 1000 = \frac{13}{100} \times 1000 = 130$$

Table II C-10

RESULTS OF COYOTE SCENT STATION SURVEY, 1978

Line No.	No. of stations	No. of visits
1. Big Jimmy	25	2
2. SG-9	10	0
3. Scandard	10	0
4. SG-15	10	2
5. SG-11	10	0
6. Stewart (ridge)	15	0
7. Stewart (valley)	10	1
8. Bailey (ridge)	10	0
	100	5

$$\text{Index of abundance} = \frac{\text{No. of visits}}{\text{No. of stations}} \times 1000 = 50$$

Table II C-11

Relative abundance of cottontail rabbits, 1977-78. Each transect consists of twenty 0.01 acre plots.

Transect		Habitat and location	Relative abundance*
Monitoring notation	Baseline notation		
BA 01	CH-C-12	Chained, Big Jimmy	55
BA 02	CH-C-11	"	15
BA 03	CH-C-10	"	30
BA 04	CH-C-9	"	45
BA 05	CH-C-8	"	90
BA 06	CH-C-7	"	55
BA 07	CH-C-6	"	80
BA 08	CH-C-5	"	65
BA 09	CH-C-4	"	80
BA 17	CH-C-1	Chained, Tract	35
BA 18	CH-C-2	"	45
BA 25	CH-C-3	"	60
BA 21	CH-T-1	"	70
BA 20	CH-T-2	"	35
BA 23	CH-T-3	"	42
BA 19	PJ-C-1	Pinyon-juniper, Tract	40
BA 26	PJ-C-2	"	70
BA 27	PJ-C-3	"	90
BA 16	PJ-T-1	"	35
BA 22	PJ-T-2	"	58
BA 24	PJ-T-3	"	35
BA 13	PJ-C-4	P-J, north of Piceance Crk.	85
BA 14	PJ-C-5	"	60
BA 15	PJ-C-6	"	15
BA 10	PJ-T-4	"	75
BA 11	PJ-T-5	"	75
BA 12	PJ-T-6	"	75

* Relative abundance is calculated as a percent frequency (No. of plots with fresh pellets present ÷ No. of plots sampled x 100).

Table II C-12

Relative abundance* of small mammals, 1978. At each trapping location 100 traps were set for three nights (300 trap-nights).

Common name Scientific name	TRAPPING LOCATION							
	Meadow, control plot		Meadow, developmental plot		Pinyon-juniper		Chained rangeland	
	JUN	AUG	JUN	AUG	JUN	AUG	JUN	AUG
Deer mouse Peromyscus maniculatus	3.7	29.7	4.0	22.3	9.3	15.3	12.3	14.3
Montane vole Microtus montanus	0	1.3	0.3	0.7	0	0	0	0
Western jumping mouse Zapus princeps	0	1.3	0.3	0.7	0	0	0	0
Least chipmunk Eutamias minimus	0	0	0	0.3	0.3	0.7	4.3	6.0
Uinta chipmunk Eutamias umbrinus	0	0	0	0	1.3	0.3	0.3	0.7
Golden-mantled ground squirrel Spermophilus lateralis	0	0	0	0.7	0	0	0.7	0
Bushy-tailed woodrat Neotoma cinerea	0	0	0	0	0	0	0	0.3

* Relative abundance is calculated as a percent frequency (No. of captures ÷ number of trap-nights x 100).

Table II C-13

Production and utilization of bitterbrush in the chained rangeland habitat, 1977-78.

	A	B	C
Transect	PRODUCTION: length of new shoots in fall (mm) Mean ± SE (N)	Length of shoots remaining in spring (mm) Mean ± SE (N)	UTILIZATION: in percent $C=\frac{A-B}{A}\times 100$
BA 17 (CH-C-1)	42 ± 3.8 (100)	3 ± 0.6 (90)	92
BA 18 (CH-C-2)	75 ± 9.0 (100)	4 ± 0.9 (100)	94
BA 25 (CH-C-3)	73 ± 8.3 (100)	5 ± 0.8 (100)	94
Combined	63 ± 4.3 (300)	4 ± 0.5 (290)	93
BA 21 (CH-T-1)	73 ± 6.4 (100)	9 ± 1.1 (100)	88
BA 20 (CH-T-2)	145 ± 11.2 (100)	10 ± 1.5 (100)	93
BA 23 (CH-T-3)	143 ± 10.6. (100)	16 ± 2.3 (100)	89
Combined	120 ± 5.9 (300)	12 ± 1.0 (300)	90

Table II C-14

Production and utilization of bitterbrush in the pinyon-juniper habitat, 1977-78.

Transect	A PRODUCTION: length of new shoots in fall (mm) Mean ± SE (N)	B Length of shoots remaining in spring (mm) Mean ± SE (N)	C UTILIZATION: in percent $C=\frac{A-B}{A}\times 100$
BA 19 (PJ-C-1)	48 ± 3.9 (100)	9 ± 2.1 (100)	81
BA 26 (PJ-C-2)	43 ± 3.9 (100)	4 ± 0.9 (100)	91
BA 27 (PJ-C-3)	29 ± 3.1 (100)	4 ± 1.0 (100)	85
Combined	40 ± 2.2 (300)	6 ± 0.8 (300)	85
BA 16 (PJ-T-1)	28 ± 2.6 (99)	5 ± 0.8 (80)	82
BA 22 (PJ-T-2)	94 ± 7.1 (100)	15 ± 1.8 (100)	84
BA 24 (PJ-T-3)	36 ± 2.4 (100)	9 ± 1.5 (90)	75
Combined	53 ± 3.2 (299)	10 ± 0.9 (270)	81

Table II C-15

Production and utilization of mountain mahogany in the chained rangeland habitat, 1977-78.

Transect	A PRODUCTION: length of new shoots in fall (mm) Mean ± SE (N)	B Length of shoots remaining in spring (mm) Mean ± SE (N)	C UTILIZATION: in percent $C = \frac{A-B}{A} \times 100$
BA 17 (CH-C-1)	5 ± 0.4 (100)	0.5 ± 0.13 (100)	91
BA 18 (CH-C-2)	16 ± 4.2 (100)	3.5 ± 1.23 (100)	79
BA 25 (CH-C-3)	13 ± 1.5 (50)	1.4 ± 0.38 (50)	89
Combined	11 ± 1.7 (250)	1.8 ± 0.51 (250)	83
BA 21 (CH-T-1)	9 ± 1.0 (100)	0.7 ± 0.28 (80)	92
BA 20 (CH-T-2)	15 ± 2.7 (100)	0.9 ± 0.21 (100)	94
BA 23 (CH-T-3)	44 ± 6.6 (98)	4.5 ± 0.80 (100)	90
Combined	23 ± 2.5 (298)	2.1 ± 0.32 (280)	91

Table II C-16

Production and utilization of mountain mahogany in the pinyon-juniper habitat, 1977-78.

	A	B	C
Transect	PROCUCTION: length of new shoots in fall (mm) Mean ± SE (N)	Length of shoots remaining in spring (mm) Mean ± SE (N)	UTILIZATION: in percent $C = \frac{A-B}{A} \times 100$
BA 19 (PJ-C-1)	4 ± 0.2 (100)	1.0 ± 0.18 (100)	72
BA 26 (PJ-C-2)	8 ± 1.1 (100)	1.4 ± 0.38 (100)	82
BA 27 (PJ-C-3)	12 ± 2.2 (100)	2.5 ± 0.90 (100)	80
Combined	8 ± 0.8 (300)	1.6 ± 0.33 (300)	79
BA 16 (PJ-T-1)	2 ± 0.3 (20)	1.5 ± 0.58 (20)	37
BA 22 (PJ-T-2)	23 ± 4.7 (40)	4.6 ± 1.82 (30)	80
BA 24 (PJ-T-3)	19 ± 2.2 (99)	4.6 ± 1.05 (100)	76
Combined	18 ± 1.9 (159)	4.2 ± 0.79 (150)	77

Table II C-17

Baseline evaluation of bitterbrush on Big Jimmy ridge. Twenty 0.04 acre plots occurred along each transect.

Transect	Density: No. of shrubs per acre	No. of shrubs counted	Height class (cm)			Percent live tissue on individual shrubs					No. of seedlings encountered in twenty 0.003 acre plots
			<15	15-40	>40	<25	23	50	75	100	
BA 01	49	39	3	30	6	0	3	16	19	1	0
BA 02	61	49	7	36	6	2	5	24	15	3	1
BA 03	30	24	1	13	10	1	0	6	10	7	0
BA 04	144	115	24	54	37	16	22	34	34	9	0
BA 05	114	91	10	45	36	0	20	45	22	4	0
BA 06	113	90	2	35	53	3	5	33	42	7	0
BA 07	29	23	0	7	16	0	0	4	13	6	0
BA 08	34	27	2	8	17	0	0	6	14	7	0
BA 09	6	5	0	2	3	0	0	2	3	0	0

Table II C-18

Baseline evaluation of mountain mahogany on Big Jimmy ridge. Twenty 0.04 acre plots occurred along each transect.

Transect	Density: No. of shrubs per acre
BA 01	56
BA 02	0
BA 03	3
BA 04	29
BA 05	3
BA 06	0
BA 07	9
BA 08	0
BA 09	3

Table II C-19

Production of bitterbrush, 1978.

Transect	Habitat	PRODUCTION: length of new shoots in fall (mm) Mean ± SE (N)
BA 18	chained rangeland	266 ± 16.6 (100)
BA 25	"	174 ± 11.7 (100)
BA 21	"	211 ± 17.2 (100)
BA 20	"	246 ± 18.8 (100)
BA 23	"	274 ± 25.4 (100)
BA 19	pinyon-juniper	123 ± 7.7 (100)
BA 26	"	133 ± 8.3 (100)
BA 27	"	154 ± 8.7 (100)
BA 16	"	149 ± 9.8 (100)
BA 22	"	179 ± 14.2 (100)
BA 24	"	120 ± 8.2 (100)

Table II C-20

Production of bitterbrush and mountain mahogany treated with fertilizer, 1978. All transects are located in the chained rangeland habitat.

Transect	PRODUCTION: length of new shoots in fall (mm) Mean ± SE (N)	Treatment
Bitterbrush:		
BA 28	185 ± 16 (99)	ammonia nitrate
BA 31	260 ± 20 (100)	ammonia nitrate
BA 17	223 ± 21 (100)	nitrogen and phosphorus
BA 30	201 ± 17 (100)	nitrogen and phosphorus
Mountain mahogany:		
BA 28	132 ± 7 (100)	ammonia nitrate
BA 17	114 ± 7 (100)	nitrogen and phosphorus

Table II C-21

SAGEBRUSH OCULAR SURVEY CONDUCTED IN FALL 1978

PINYON JUNIPER HABITAT

nsect	Paces	Sample Size	Young	Mature	Decadent	Low	Medium	High	Density*
10	5	25	--	15	10	2	10	13	1, 1, 1
11	5	25	--	17	8	---	19	6	1, 1, 1
12	3	40	--	22	18	5	20	15	1, 2, 1, 1
13	3	50	--	30	20	7	20	23	4, 3, 6, 2, 1
14	3	50	--	37	13	3	25	22	3, 4, 4, 1, 1
15	3	50	--	31	19	3	22	25	1, 5, 5, 1, 3
16	3	50	--	20	30	---	13	37	4, 3, 4, 1, 2
19	5	25	--	3	22	1	10	14	1, 2, 1
22	5	25	--	4	21	1	9	15	2, 1
24	5	25	--	2	23	2	3	20	0, 1
26	3	50	--	20	30	1	17	32	1, 2, 1, 1, 0
27	3	50	--	25	25	2	20	28	1, 1, 2, 1, 1
AL		465	0	226	239	27	188	250	
CENT				48.6	51.4	5.8	40.4	53.8	

Density explained in detail in the Development Monitoring Plan

Table II C-22

SAGEBRUSH OCULAR SURVEY CONDUCTED IN FALL 1978

SAGEBRUSH HABITAT

Transect	Paces	Sample Size	Young	Mature	Decadent	Low	Medium	High	Density *
BA01	2	50	10	40	---		48	2	
BA02	2	50	12	38	---	34	16	---	
BA03	2	50	11	39	---	40	10	---	
BA04	3	50	1	48	1	22	24	4	5, 3, 3, 4, 4
BA05	3	50	1	41	8	10	21	19	7, 9, 11, 5, 9
BA06	3	50	2	47	1	21	10	19	9, 9, 6, 4, 14
BA07	3	50	1	47	2	32	13	5	10, 8, 12, 8,
BA08	3	50	3	39	8	12	20	18	9, 3, 4, 11, 7
BA09	2	50	1	37	12	7	8	35	7, 6, 2, 11, 6
BA17	2	50	1	49	---	41	9	---	3, 2, 1, [illegible] 7
BA18	3	50	8	42	---	27	23	---	1, 2, 1, 3, 1
BA20	3	50	1	47	2	15	20	15	5, 2, 3, 7, 3
BA21	3	50	2	47	1	17	27	6	2, 1, 3, 1, 2
BA23	3	50	--	50	---	25	22	3	2, 3, 7, 6, 4
BA25	2	50	--	49	1	11	24	15	4, 9, 7, 1, 1
TOTAL		750	54	660	36	314	295	141	
PERCENT			7.2	88	4.8	41.9	39.3	18.8	

* Density explained in detail in the Development Monitoring Plan

Avifauna

Introduction

Estimates of density, percent relative abundance, and diversity indices were calculated for songbird and songbird-like species for 1977 between January 15 and January 18 and June 7 and June 9. Raptor nest censusing for 1978 was conducted during late April and early June.

Scope of Work

Two transects in chained pinyon-juniper rangeland and two transects in pinyon-juniper woodland were censused in triplicate. One chained pinyon-juniper transect is located near the proposed construction site, the other at a control site which will not be subject to future disturbance. The pinyon-juniper woodland transects are also located in an area near future disturbance and in a control area. Forty-six raptor nest locations were checked for nesting activity.

Methods

The method employed for censusing was the strip transect method as described by Emlen (1971). This method provides data from which quantitative estimates of density of songbird and songbird-like species can be calculated. Transects are 800m long and are permanently marked with steel rebar stakes and flagging. The method used for the analysis of quantitative data collected from transects sampled are similiar to the analytical methods described in the Sixth Quarterly Report on Inventory of Avifauna at Tract C-b Shale Oil Project (Ecology Consultants, Inc., 1976). Estimates of density, percent relative abundance, and diversity indices were calculated for each census period.

Nests were found using photographs and topographic maps of their locations. Observations were made using a spotting scope from a safe distance (50 meters or more) so as not to disturb possible nesting activity. Any new or undocumented nests were photographed and recorded. Where there was no observed activity, closer examination of the nest was made to look for fresh pellets, whitewash or green material.

Results

Table II C-23 lists the bird species observed during the Spring 1978 census. Tables II C-24 through II C-27 summarize strip transect results and estimates for relative abundance and density for each transect. Diversity indices for each transect are present in Table II C-28. As with previous sample periods, the pinyon-juniper woodland exhibited greater avian diversity than the chained pinyon-juniper rangeland.

In April, during the search for early nesting raptors, five raptor nests were active: Three red-tailed hawks and two great horned owls.

In June, during the search for late nesting raptors three active nests were observed. Two broods of great horned owls and one brood of red-tailed hawks were observed.

Table II C-29 shows the raptor nesting record for the raptors on Tract C-b and the surrounding area.

Nomenclature used in this report follows the American Ornithologists' Union (AOU) Checklist of North American Birds (AOU, 1957) and subsequent revisions (AOU, 1973 and 1976).

TABLE II C-23

BIRD SPECIES OBSERVED ON TRACT C-b DURING SPRING 1978 CENSUS

ORDER Family Species	Common Name	Observed		
		Pinyon-juniper	Chained pinyon-juniper	Fly over
FALCONIFORMES				
ACCIPITRIDAE				
Buteo jamaicensis	red-tailed hawk			X
COLUMBIFORMES				
COLUMBIDAE				
Zenaida macroura	mourning dove	X	X	
APODIFORMES				
APODIDAE				
Aeronautes saxatalis	white-throated swift			X
TROCHILIDAE				
Selasphorus platycercus	broad-tailed hummingbird	X	X	
PICIFORMES				
PICIDAE				
Colaptes auratus	common flicker	X	X	
Sphyrapicus thyroideus	Williamson's sapsucker	X		
Picoides villosus	hairy woodpecker	X		
PASSERIFORMES				
TYRANNIDAE				
Myiarchus cinerascens	ash-throated flycatcher	X	X	
Empidonax hammondii	Hammond's flycatcher	X		
Empidonax oberholseri	dusky flycatcher	X		

TABLE II C-23 (cont.)

Page 2 of 3

ORDER Family Species	Common Name	Observed Pinyon-juniper	 Chained pinyon-juniper	 Fly over
PASSERIFORMES (cont.)				
CORVIDAE				
Gymnorhinus cyanocephalus	pinyon jay	X	X	
Corvus corax	common raven			X
PARIDAE				
Parus gambeli	mountain chickadee	X		
Parus Inornatus	plain titmouse	X		
Psaltriparus minimus	bushtit	X		
SITTIDAE				
Sitta carolinensis	white-breasted nuthatch	X		
TROGLODYTIDAE				
Troglodytes aedon	house wren	X	X	
TURDIDAE				
Myadestes townsendi	Townsend's solitaire	X		
Catharus guttata	hermit thrush	X		
Sialia currucoides	mountain bluebird	X	X	
VIREONIDAE				
Vireo solitarius	solitary vireo	X		
PARULIDAE				
Vermivora virginiae	Virginia's warbler	X		
Dendroica coronata	yellow-rumped warbler		X	
Dendroica nigrescens	black-throated gray warbler	X	X	

TABLE II C-23 (cont.)

ORDER Family Species	Common Name	Observed		
		Pinyon-juniper	Chained pinyon-juniper	Fly over
FRINGILLIDAE				
Pheucticus melanocephalus	black-headed grosbeak	X		
Carpodacus cassinii	Cassin's finch	X		
Carpodacus mexicanus	house finch		X	
Cardeulis pinus	pine siskin	X		
Pipilo chlorura	green-tailed towhee	X	X	
Pipilo erythropthalmus	rufous-sided towhee	X		
Passerculus sandwichensis	savannah sparrow		X	
Pooecetes gramineus	vesper sparrow		X	
Junco caniceps	gray-headed junco	X		
Spizella passerina	chipping sparrow	X	X	
Spizella breweri	Brewer's sparrow	X	X	

TABLE II C-24

AVIFAUNA ESTIMATES ON TRANSECT 1, CHAINED PINYON-JUNIPER RANGELAND (CONTROL) AT TRACT C-b FOR SPRING SAMPLE PERIOD, 1978

Species	# Obs	Coeff det	Basal adj	Density /ha	%Relative abundance
Mourning dove	1	1.00	*	0.02	0.9
Broad-tailed hummingbird	1	0.28	*	0.09	4.1
Ash-throated flycatcher	1	0.63	*	0.04	1.8
House wren	2	0.65	*	0.08	3.6
Mountain bluebird	8	*	*	0.20	9.1
Black-throated gray warbler	1	1.00	*	0.03	1.4
House finch	1	0.62	*	0.04	1.8
Green-tailed towhee	8	0.57	*	0.36	16.4
Savannah sparrow	5	0.63	*	0.20	9.1
Chipping sparrow	1	0.63	*	0.04	1.8
Brewer's sparrow	21	0.49	*	1.10	50.0
	Total			2.20	

TABLE II C-25

AVIFAUNA ESTIMATES ON TRANSECT 2, PINYON-JUNIPER WOODLAND (DISTURBED) AT TRACT C-b FOR SPRING SAMPLE PERIOD, 1978

Species	# Obs	Coeff det	Basal adj	Density /ha	% Relative abundance
Borad-tailed hummingbird	1	0.73	*	0.04	2.1
Common flicker	1	0.90	*	0.03	1.5
Ash-throated flycatcher	2	0.50	*	0.10	5.2
Pinyon jay	2	1.00	*	0.05	2.6
Mountain chickadee	5	0.56	*	0.23	11.8
Plain titmouse	1	0.31	*	0.08	4.1
Bushtit	3	0.22	*	0.35	18.0
White-breasted nuthatch	1	0.59	*	0.04	2.1
Mountain bluebird	3	0.42	*	0.18	9.2
Solitary vireo	2	0.59	*	0.09	4.6
Virginia's warbler	7	0.75	*	0.24	12.4
Black-throated gray warbler	8	0.60	*	0.34	17.5
Black-headed grosbeak	1	0.75	*	0.03	1.5
Gray-headed junco	1	0.43	*	0.06	3.1
Brewer's sparrow	2	0.62	*	0.08	4.1
		Total		1.94	

TABLE II C-26

AVIFAUNA ESTIMATES ON TRANSECT 3, CHAINED PINYON-JUNIPER RANGELAND (DISTURBED) AT TRACT C-b FOR SPRING SAMPLE PERIOD, 1978

Species	# Obs	Coeff det	Basal adj	Density /ha	% Relative abundance
Borad-tailed hummingbird	1	0.28	*	0.09	2.3
Common flicker	2	1.00	*	0.05	1.3
Ash-throated flycatcher	3	0.63	*	0.12	3.1
Pinyon jay	4	0.25	*	0.41	10.7
House wren	2	0.65	*	0.08	2.1
Mountain bluebird	10	*	*	0.26	6.8
Yellow-rumped warbler	2	0.19	*	0.27	7.0
Green-tailed towhee	24	0.57	*	1.08	28.2
Vesper sparrow	3	0.57	*	0.10	2.6
Chipping sparrow	3	0.63	*	0.12	3.1
Brewer's sparrow	24	0.49	*	1.25	32.6
		Total		3.83	

TABLE II C-27

AVIFAUNA ESTIMATES ON TRANSECT 4, PINYON-JUNIPER WOODLAND (CONTROL) AT TRACT C-b FOR SPRING SAMPLE PERIOD, 1978

Species	# Obs	Coeff det	Basal adj	Density /ha	% Relative abundance
Mourning dove	5	0.74	*	0.17	4.2
Williamson's sapsucker	1	0.38	*	0.07	1.7
Hammond's flycatcher	1	0.25	*	0.10	2.5
Dusky flycatcher	7	0.44	*	0.41	10.2
Mountain chickadee	5	0.56	*	0.23	5.7
Bushtit	2	0.22	*	0.23	5.7
House wren	5	0.45	*	0.28	6.9
Hermit thrush	4	0.66	*	0.16	4.0
Mountain bluebird	10	0.42	*	0.61	15.1
Solitary vireo	7	0.59	*	0.30	7.4
Black-throated gray warbler	16	0.60	*	0.68	16.9
Black-headed grosbeak	2	0.75	*	0.07	1.7
Cassin's finch	1	0.50	*	0.05	1.2
Pine siskin	1	0.43	*	0.06	1.5
Green-tailed towhee	2	0.54	*	0.10	2.5
Rufous-sided towhee	1	0.54	*	0.05	1.2
Chipping sparrow	5	0.34	*	0.38	9.4
Brewer's sparrow	2	0.62	*	0.08	2.0
		Total		4.03	

TABLE II C-28

SHANNON-WIENER DIVERSITY INDICES (H'), UNBIASED ESTIMATES OF H' (E(H')), VARIANCE OF H' (var (H')), MAXIMUM EXPECTED VALUE OF H' (H'(max)), AND EQUITABILITY (J), FOR AVIFAUNA TRANSECTS AT TRACT C-b DURING SPRING SAMPLE PERIOD, 1978

Transect	Vegetation type	H'	E(H')	var(H')	H'(max)	J
1	Chained pinyon-juniper rangeland	1.665	1.634	0.007	2.398	0.694
2	Pinyon-juniper woodland	2.398	2.350	0.004	2.708	0.886
3	Chained pinyon-juniper rangeland	1.885	1.868	0.003	2.398	0.786
4	Pinyon-juniper woodland	2.545	2.522	0.002	2.890	0.881

TABLE II C-29

RAPTOR NESTING RECORD

est No.	Species	Status 1976	Status 1977		Status 1978	
			April	June	April	June
1	Unknown	I	I	I	I	I
2	Unknown	I	I	I	I	I
3	Unknown	I	I	I	I	I
4	Red-tailed Hawk	E or Y	I	I	I	I
5	Unknown	I	I	I	I	I
5a	Common Raven	-	-	E or Y	I	I
6	Red-tailed Hawk	E	I	2Y	I	I
7	Red-tailed Hawk	I	I	-	E	I
8	Red-tailed Hawk	4Y	I	I	E	I
9	Common Raven	I	I	I	I	I
10	Red-tailed Hawk	I	I	I	I	I
11	Could not Locate					
12	Red-tailed Hawk	I	I	I	E	1Y
13	Red-tailed Hawk	I	I	I	I	I
14	Unknown	I	I	I	I	I
15	Unknown	I	I	I	I	I
16	Great Horned Owl	I	I	I	E	2Y
17	Great Horned Owl	I	I	I	I	I
18	Red-tailed Hawk	I	I	I	I	I
19	Great Horned Owl	1Y	I	I	I	I
20	Not on Map					
21	Not on Map					
22	Unknown	I	I	I	I	I
23	Not on Map					
24	Red-tailed Hawk	I	I	I	I	I
25	Great Horned Owl	I	I	I	I	I
26	Unknown	I	I	I	I	I
27	Unknown	I	I	I	I	I
28	Golden Eagle	1Y	I	I	I	I
29	Unknown	I	I	I	I	I
30	Red-tailed Hawk	2Y	I	I	I	I
31	Unknown	I	I	I	I	I
32	Great Horned Owl	2Y	2Y	-	I	I
33	Unknown	I	I	I	I	I
34	Unknown	I	I	I	I	I
35	Unknown	I	I	I	I	I
36	Red-tailed Hawk	2Y	I	I	I	I
37	Unknown	I	I	I	I	I
38	Unknown	I	I	I	I	I
39	Golden Eagle	1Y	I	I	I	I
40	Unknown	I	I	I	I	I
41	Unknown	I	I	I	I	I
42	Unknown	I	I	I	I	I
42a	Red-tailed Hawk	-	-	2Y	I	I
43	Great Horned Owl	2Y	I	I	E	2Y
44	Unknown	I	I	I	I	I
45	Red-tailed Hawk	2Y	I	I	I	I
46 (new)	Red-tailed Hawk				E	I

Code:

I = inactive nest
E = adult bird observed in an incubating posture; presumed to be incubating eggs
(2)Y = number of young observed in the nest
E or Y = adult bird observed in an incubating posture; due to time of year, assumed to be either incubating eggs or brooding very young chicks.

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AQUATIC STUDIES

II C-2 AQUATIC STUDIES

Introduction

Periphyton has been selected as a key indicator of water quality. Periphyton was measured at a control and a development site. Benthos which is collected by the U.S.G.S. has only been reported through May, 1978. Water quality from daily water samples was not analyzed because no significant difference was noted.

Scope

This report marks the completion of the analysis of the six monthly periphyton samples collected between May 19 and October 18, 1978 from two stations in Piceance Creek. In addition to tables summarizing the data over the 6 month study period (II C-30 through II C-32), all the detailed data of the analyses are provided together in this report (II C-33 through II C-41).

Benthic invertebrates were collected monthly, by the U. S. Geological Survey (U.S.G.S.) at these two stations: Piceance Creek near Stewart Gulch and Piceance Creek upstream from Hunter Creek. The location and description for each of the sampling stations for periphyton and benthos can be found in Volume IV C-b Final Environmental Baseline Report (1977).

Methods

Periphyton

Periphyton (attached algae) was collected monthly from artificial substrates at two stations in Piceance Creek, Colorado. The upstream station, Stewart, was located near the confluence of Stewart Creek and the downstream station, Hunter, was located near the confluence of Hunter Creek.

Following the colonization period of at least 21 days, slides were removed from the immersed samplers. Each slide was placed into a separate labeled polyethylene sample container. Three slides were air dried for biomass analysis and three slides were fixed with M3 preservative (Meyer 1971) for taxanomic identification and enumeration at both stations.

Species Identification and Enumeration - Each preserved slide taken from a station was treated as one replicate. To prepare for laboratory analysis, each slide was scraped into the collection bottle and rinsed with distilled water to a total volume of 140 ml.

While samples were stirred vigorously with a magnetic stirrer to uniformly distribute the periphytic organisms, a small aliquot (1 to 20 ml depending on sample density) was removed and added to a settling cylinder situated upon a combined plate chamber. Following a sedimentation period of at least four days, the sedimentation tube of the combined plate chamber was moved laterally to a drain hole and emptied, leaving the sediment in the recessed plate chamber (Wild Heerbrugg, Ltd. 1976). Samples were analyzed utilizing a Wild M-40 research inverted microscope at a magnification of 560X.

Table II C-30

Summary Species List of Periphyton Collected at Stewart and Hunter Stations, Piceance Creek, Colorado, 1978

Taxon	Stewart						Hunter					
	May	June	July	Aug	Sept	Oct	May	June	July	Aug	Sept	Oct
Division Bacillariophyta												
Achnanthes lanceolata			D	+	+	+		+	D	+		+
A. lanceolata var. dubia	+	+	D	D	+	+	+	D	D	D		D
A. minutissima	+	D	D	D	D	D	D	D	D	D		+
Amphora ovalis						+						+
A. perpusilla			+	+					+	+		+
A. veneta					+							
A. sp.		+	+	+	+		+	+	+	+		
Caloneis amphisbaena						+						+
Cocconeis pediculus		+	+	D	D	D		+	+	D		D
C. placentula	+					+	+	+				+
C. placentula var. euglypta			+	D	+	+			+	D		D
Cyclotella meneghiniana		+	+	+		+			+	+		+
nr. Cylindrotheca gracilis									+			+
Cymatopleura elliptica										+		+
Cymbella affinis			+	+						+		
C. minuta	+	+	+	+	+	+						
C. tumida						+	+					
C. sp.		+	+									
Denticula sp.							+					
Diatoma tenue var. elongatum						+						
D. vulgare						+						
Epithemia turgida						+						
Fragilaria crotonesis	+	+				+						
F. vaucheriae	+		+									
F. sp.		+						+		+		
Gomphonema acuminatum						+					SAMPLER DESTROYED	
G. gracile							+		+			
G. intricatum var. vibrio		+						+				
G. olivaceum	+	+		+		+	+	+	+	+		+
G. parvulum	+	+	+	+		+	+	+	+	+		+
G. subclavatum					+	+						
G. subclavatum var. commutatum							+					
G. truncatum					+	+						
G. spp.	+	+		+	+	+	+	+		+		+
Gyrosigma sp.		+										+
Hantzschia amphioxys	+	+		+			+					
Melosira varians	+											+
Meridion circulare	+									+		
Navicula accomoda	+											
N. capitata	+			+		+	+					
N. cryptocephala	+			+			+			+		
N. cryptocephala var. veneta	D	+	+	+	+	+	D	+	+	+		+
N. cuspidata	+											
N. nr. luzonensis			+	+					+			
N. nr. menisculus var. upsaliensis							+					
N. minima	+	+					+	+				
N. mutica								+				
N. mutica var. undulata	+											
N. notha			+	+						+		
N. pupula var. rectangularis												+
N. secreta var. apiculata	D	D	+	D	+	+	D	+	+	+		D
N. tripunctata var. schizonemoides	D		+	+		+	D	+	+	+		
N. viridula var. avenacea	+	+	+	+		+	+	D	+	+		D
N. spp.	D	+	+	+	+	+	D	+	+	+		+
Neidium sp.	+											
Nitzschia acicularis	+	D				+	+	D	+	+		+
N. amphibia			+	+					+	+		
N. apiculata	+	+	+	+		+	+		+	+		+
N. dissipata	+	+				+	+	+		+		
N. hungarica	+	+				+		+				+
N. linearis		+	+						+	+		
N. palea	D	D					D	D				
N. sigmoidea	+						+	+				+
N. tryblionella var. levidensis	+											
N. vermicularis										+		
N. vitrea						+						
N. spp.	D	D	+	+	+	+	D	D	+	+		+

Table II C-30 (Cont.)

Taxon	Stewart May	Stewart June	Stewart July	Stewart Aug	Stewart Sept	Stewart Oct	Hunter May	Hunter June	Hunter July	Hunter Aug	Hunter Sept	Hunter Oct
Division Bacillariophyta (cont'd)												
Pinnularia borealis	+											
P. sp.	+					+						
Rhoicosphenia curvata			+	+		+			+			+
Rhopalodia gibba var. ventricosa	+					+						
R. musculus	+											
Stauroneis anceps						+						
Stephanodiscus hantzschi	+											
Surirella angustata	+	+						+				
S. ovalis	+	+	+	+			+	+	+	+		+
S. ovata	+	+	+	+			+	+	+	+		+
S. sp.									+	+		+
Synedra delicatissima	+											
S. fasciculata							+					
S. ulna	+	+	+			+			+	+		+
S. sp.	+	+				+	+	+				+
Unidentified centrics		+		+			+	+				
Unidentified pennates	D	+	+	+	+		D	+	+	+		+
Division Chlorophyta											SAMPLER DESTROYED	
Characium sp.				+								
Cladophora sp.			+	+					+	+		
Closterium sp.				+								+
Crucigenia quadrata							+					
Oedogonium sp.		+			+	+						+
Scenedesmus acutus						+						
S. sp.								+				
Stigeoclonium sp.		+	+	+	+	+	+	+	+			+
Ulothrix sp.		+				+						
Unidentified coccoid					+		+		+			
Unidentified filament		+	+	+		+			+	+		+
Unidentified flagellate						+						
Division Cyanophyta												
Chroococcus sp.		+	+									+
Merismopedia punctata				+	+							
Merismopedia tenuissima			+									
Oscillatoria sp.	+		+					+				
Phormidium sp.			+	+					+	+		
Unidentified filament						+						
Division Cryptophyta												
Cryptomonas ovata							+					
Division Chrysophyta												
Dinobryon borgei				+	+							
D. sp.												+
Unidentified coccoid												

+ = Present

D = Present as dominant (greater than 5% of the mean total abundance)

Table II C-31

Summary of Species Diversity ($\bar{d}$) of the Mean for Periphyton Collected at Stewart and Hunter Stations, Piceance Creek, Colorado, 1978.

Date	Stewart	Hunter
May	3.67	3.70
June	3.15	3.14
July	2.37	2.78
August	3.59	3.32
September	1.14	Sampler Destroyed
October	1.70	3.15

Table II C-32

Summary of Mean Biomass (mg/cm^2) Expressed as Ash-free Dry Weight for Periphyton Collected at Stewart and Hunter Stations, Piceance Creek, Colorado, 1978.

Date	Stewart	Hunter
May	0.52	0.66
June	0.42	1.66
July	0.24	0.37
August	0.05	0.28
September	0.35	Sampler Destroyed
October	0.13	0.22

Table II C-33

Abundance (units/cm^2), percent relative abundance (%RA), and species diversity of periphyton from artificial substrates on Piceance Creek, Colorado at Stewart and Hunter Stations, May 18, 1978

	Stewart					Hunter				
Taxon	Rep 4	Rep 5	Rep 6	Mean	%RA	Rep 4	Rep 5	Rep 6	Mean	%RA
DIVISION BACILLARIOPHYTA (Diatoms)										
Achnanthes lanceolata var. dubia	6	16	18	13.3	2.0	6	4	6	5.3	1.1
A. minutissima	10	16	16	14.0	2.1	16	38	28	27.3	5.8
Amphora sp.							4	2	2.0	0.4
Cocconeis placentula	P	6	2	2.7	0.4	6	2		2.7	0.6
Cymbella minuta	2	4	2	2.7	0.4					
C. tumida						4	2	2	2.7	0.6
Denticula sp.								2	0.7	0.1
Fragilaria crotonensis			2	0.7	0.1					
F. vaucheriae			P	P						
Gomphonema gracile								2	0.7	0.1
G. olivaceum	2	6	6	4.7	0.7	20	4		8.0	1.7
G. parvulum	12		16	9.3	1.4	42	28		23.3	3.0
G. subclavatum var. commutatum						2	4	4	3.3	0.7
G. spp.	10	6		5.3	0.8		12	2	4.7	1.0
Gyrosigma sp.		2	6	2.7	0.4	16			5.3	1.1
Hantzschia amphioxys	6	4	8	6.0	0.9	4		2	2.0	0.4
Melosira varians			P	P						
Meridion circulare		P	4	1.3	0.2					
Navicula accomoda	4	2		2.0	0.3					
N. capitata	2		2	1.3	0.2			4	1.3	0.3
N. cryptocephala	P		2	0.7	0.1	P	P	P	P	
N. cryptocephala var. veneta	85	89	87	87.0	13.0	12	10	12	11.3	2.4
N. cuspidata			2	0.7	0.1					
N. nr. menisculus var. upsaliensis						2	4		2.0	0.4
N. minima	4		2	2.0	0.3			8	2.7	0.6
N. mutica						P			P	

Table II C-33 (Cont.)

Taxon	Stewart Rep 4	Rep 5	Rep 6	Mean	%RA	Hunter Rep 4	Rep 5	Rep 6	Mean	%RA
Navicula mutica var. *undulata*			2	0.7	0.1					
N. secreta var. *apiculata*	71	85	83	79.7	11.9	57	63	40	53.3	11.4
N. tripunctata var. *schizonemoides*	40	55	32	42.3	6.3	55	81	69	68.3	14.6
N. viridula var. *avenacea*	6	32	20	19.3	2.9	P	P	P	P	
N. spp.	47	51	55	51.0	7.6	34	16	20	23.3	5.0
Neidium sp.	2			0.7	0.1					
Nitzschia acicularis	12	16	8	12.0	1.8	12	20	24	18.7	4.0
N. apiculata	P			P				2	0.7	0.1
N. dissipata	P			P			4		1.3	0.3
N. hungarica	2	4	4	3.3	0.5					
N. palea	26	63	42	43.7	6.5	16	36	34	28.7	6.1
N. sigmoidea	2		4	2.0	0.3	P			P	
N. tryblionella var. *levidensis*		2	2	1.3	0.2					
N. spp.	142	206	199	182.3	27.2	97	145	122	121.3	26.0
Pinnularia borealis			2	0.7	0.1					
P. sp.			4	1.3	0.2					
Rhopalodia gibba var. *ventricosa*			P	P						
R. musculus	2			0.7	0.1					
Stephanodiscus hantzschii			P	P						
Surirella angustata	P	2		0.7	0.1					
S. ovalis	10			3.3	0.5		2		0.7	0.1
S. ovata	26	38	32	32.0	4.8	P	8	4	4.0	0.8
Synedra delicatissima	6			2.0	0.3					
S. fasciculata						P			P	
S. ulna			P	P						
S. sp.		2	4	2.0	0.3	2			0.7	0.1
Unidentified centrics								2	0.7	0.1

Table II C-33 (Cont.)

Taxon	Stewart Rep 4	Stewart Rep 5	Stewart Rep 6	Stewart Mean	Stewart %RA	Hunter Rep 4	Hunter Rep 5	Hunter Rep 6	Hunter Mean	Hunter %RA
Unidentified pennates	43	43	16	34.0	5.1	38	36	26	33.3	7.1
Total Bacillariophyta	579	749	682	670.0	99.9	439	520	417	458.7	98.2
DIVISION CHLOROPHYTA **(Green algae)**										
Crucigenia quadrata						2		2	1.3	0.3
Stigeoclonium sp.						4	8	P	4.0	0.8
Unidentified coccoids						8			2.7	0.6
Total Chlorophyta						14	8	2	8.0	1.7
DIVISION CYANOPHYTA **(Blue-green algae)**										
Oscillatoria sp.	2			0.7	0.1					
Total Cyanophyta	2			0.7	0.1					
DIVISION CRYPTOPHYTA										
Cryptomonas ovata							2		0.7	0.1
Total Cryptophyta							2		0.7	0.1
Total Individuals	581	749	682	670.7		453	530	419	467.3	
Total Taxa	32	24	36	46		28	25	26	39	
Diversity ($\bar{d}$)	3.64	3.48	3.62	3.67		3.69	3.50	3.42	3.70	
Maximum diversity ($\bar{d}$ max)	4.75	4.52	4.95	5.28		4.46	4.52	4.58	5.09	
Equitability (%)	76.60	76.97	73.18	69.39		82.85	77.39	74.67	72.63	

P = present

Table II C-34

Abundance (units/cm^2), percent relative abundance (%RA), and species diversity ($\bar{d}$) of periphyton from artificial substrates on Piceance Creek, Colorado at Stewart and Hunter Station, June 20, 1978

Taxon	Stewart Rep 4	Stewart Rep 5	Stewart Rep 6	Stewart Mean	Stewart %RA	Hunter Rep 4	Hunter Rep 5	Hunter Rep 6	Hunter Mean	Hunter %RA
DIVISION BACILLARIOPHYTA (Diatoms)										
Achnanthes lanceolata						2,270			756	0.1
A. lanceolata var. dubia	6,190	39,200	41,200	28,870	3.8	79,400	43,100	61,200	61,250	7.6
A. minutissima	39,200	53,600	70,100	54,310	7.2	68,000	70,300	49,900	62,760	7.8
Amphora sp.		2,060		687	0.1	4,540		6,810	2,269	0.3
Cocconeis pediculus	P	P	2,060	687	0.1	2,270	2,270		1,513	0.2
C. placentula						6,810	P	4,540	3,781	0.5
Cyclotella meneghiniana	2,060	P	10,300	4,120	0.5					
Cymbella minuta	P		P	P						
C. sp.		P		P						
Fragilaria crotonensis			P	P						
F. sp.	2,060			687	0.1		6,810		2,269	0.3
Gomphonema intricatum var. vibrio	P			P				2,270	756	0.1
G. olivaceum	14,400	18,600	8,250	13,750	1.8	25,000	4,540	6,810	12,100	1.5
G. parvulum	6,190	6,190	2,060	4,812	0.6		P	2,270	756	0.1
G. spp.	2,060	4,120		2,060	0.3	9,070			3,025	0.4
Hannaea arcus		P		P						
Hantzschia amphioxys		P	P	P						
Navicula cryptocephala var. veneta	18,600	26,800	26,800	24,060	3.2	6,810			2,269	0.3
N. minima	12,400	14,400	18,600	15,120	2.0	4,540	6,810	13,600	8,320	1.0
N. secreta var. apiculata	57,700	74,200	66,000	66,000	8.8	22,700	22,700	34,000	26,470	3.3
N. tripunctata var. schizonemoides							2,270		756	0.1
N. viridula var. avenacea	16,500	16,500	33,000	22,000	2.9	95,300	86,200	79,400	86,960	10.7
N. spp.		37,100	6190	14,440	1.9		6810		2269	0.3

Table II C-34 (Cont.)

Taxon	Stewart Rep 4	Stewart Rep 5	Stewart Rep 6	Stewart Mean	Stewart %RA	Hunter Rep 4	Hunter Rep 5	Hunter Rep 6	Hunter Mean	Hunter %RA
Nitzschia acicularis	53,600	53,600	82,500	63,250	25.2	216,000	284,000	263,000	254,100	31.4
N. apiculata			P	P						
N. dissipata		4,120	2,060	2,060	0.3	13,600	2,270	15,900	10,590	1.3
N. hungarica	2,060	2,060	4,120	2,750	0.4		2,270		756	0.1
N. linearis			6,190	2,062	0.3					
N. palea	72,200	78,400	51,600	67,370	8.9	61,200	122,000	93,000	92,200	11.4
N. sigmoidea							P		P	
N. spp.	315,500	338,200	286,700	313,500	41.6	83,900	188,000	141,000	137,600	17.0
Surirella angustata	P		P	P				2,270	756	0.1
S. ovalis	P	P	2,060	687	0.1		P	4,540	1,512	0.2
S. ovata	8,250	4,120	8,250	6,875	0.9	13,600	4,540	4,540	7,562	0.9
Synedra ulna	6,190	P		2,062	0.3					
S. sp.		4,120		1,406	0.2	2,270			756	0.1
Unidentified centrics	2,060	2,060		1,375	0.2			2,270	756	0.1
Unidentified pennates	22,700	43,300	24,700	30,250	4.0	9,070	13,600	31,800	18,150	2.2
Total Bacillariophyta	660,600	823,000	753,000	745,200	98.9	726,000	869,000	819,000	804,600	99.4
DIVISION CHLOROPHYTA (Green algae)										
Oedogonium sp.			2,060	687	0.1					
Scenedesmus sp.						2,270			756	0.1
Stigeoclonium sp.		2,060		687	0.1	2,270	4,540		2,269	0.3
Ulothrix sp.		2,060	P	687	0.1					
Unidentified filament	16,500	2,060	P	6,187	0.8					
Total Chlorophyta	16,500	6,190	2,060	8,249	1.1	4,540	4,540		3,025	0.4

Table II C-34 (Cont.)

Taxon	Stewart					Hunter				
	Rep 4	Rep 5	Rep 6	Mean	%RA	Rep 4	Rep 5	Rep 6	Mean	%RA
DIVISION CYANOPHYTA (Blue-green algae)										
Chroococcus sp.		P		P						
Oscillatoria sp.							4,540		1,512	0.2
Total Cyanophyta		P		P			4,540		1,512	0.2
Total Individuals	676,000	829,000	755,000	753,400		730,000	878,000	819,000	809,100	
Total Taxa	25	31	28	39		21	23	19	32	
Diversity ($\bar{d}$)	2.87	3.13	3.17	3.15		3.27	2.86	3.09	3.14	
Maximum diversity ($\bar{d}$ max)	4.32	4.52	4.39	4.95		4.39	4.25	4.25	4.95	
Equitability (%)	66.44	69.29	72.17	63.55		74.40	67.45	72.65	63.35	

P = present

Table II C-35

Abundance (units/cm^2), Percent Relative Abundance (%RA), and Species Diversity of Periphyton from Artificial Substrates on Piceance Creek, Colorado, at Stewart and Hunter Stations, July 19, 1978

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION BACILLARIOPHYTA (Diatoms)										
Achnanthes lanceolata	18,974	22,769	92,972	44,905.0	9.0	34,153	18,974	14,230	22,452.3	5.9
A. lanceolata var. dubia	177,406	200,175	235,276	204,285.7	41.1	83,485	124,279	93,921	100,561.7	26.4
A. minutissima	203,021	123,330	192,585	172,978,7	34.8	135,663	142,304	159,380	145,782.3	38.3
Amphora perpusilla	2,846	1,897	5,692	3,478.3	0.7	949	949		632.7	0.2
A. sp.		P	P	P	-	P	P		P	-
Cocconeis pediculus	P	949	17,077	6,008.7	1.2	P	949	P	316.3	0.1
C. placentula var. euglypta	3,795	1,897	1,897	2,529.7	0.5	15,179	13,282	12,333	13,598.0	3.6
Cyclotella meneghiniana			949	316.3	0.1		P	2,846	948.7	0.2
nr. Cylindrotheca gracilis						P		P	P	-
Cymbella affinis	P			P	-					
C. minuta	949	P		316.3	0.1					
C. sp.			2,846	948.7	0.2					
Fragilaria vaucheriae	949			316.3	0.1					
Gomphonema gracile						P			P	-
G. olivaceum						949	2,846	P	1,265.0	0.3
G. parvulum	19,923	11,384	7,590	12,965.7	2.6	4,743	3,795	949	3,162.3	0.8
Navicula cryptocephala var. veneta		949	9,487	3,478.7	0.7	4,743	1,897	2,846	3,162.3	0.8
N. nr. luzonensis	6,641	4,743	10,436	7,273.3	1.5	18,025	13,282	3,795	11,700.7	3.1
N. notha		2,846		948.7	0.2					
N. secreta var. apiculata	3,795	3,795	7,590	5,060.0	1.0	12,333	16,128	14,230	14,230.3	3.7
N. tripunctata var. schizonemoides	P		949	316.3	0.1		P		P	-
N. viridula var. avenacea	2,846		P	948.7	0.2	8,538	6,641	7,590	7,589.7	2.0

Table II C-35 (Cont.)

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
N. spp.	2,846	949		1,265.0	0.2	7,590	4,743		4,111.0	1.1
Nitzschia acicularis						P		949	316.3	0.1
N. amphibia	949	2,846	949	1,581.3	0.3		949	949	632.7	0.2
N. apiculata	P	P	P	P	-	P		1,897	632.3	0.2
N. linearis		949	P	316.3	0.1	P		P	P	-
N. spp.	1,897	3,795	6,641	4,111.0	0.8	8,538	5,692	9,487	7,905.7	2.1
Rhoicosphenia curvata		1,897	949	948.7	0.2	1,897	1,897		1,264.7	0.3
Surirella ovalis	949	P	P	316.3	0.1	949	949	949	949.0	0.2
S. ovata	P	949	P	316.3	0.1		P		P	-
S. sp.							P		P	-
Synedra ulna			P	P	-			P	P	-
Unidentified pennates	1,897	1,897	1,897	1,897.0	0.4	5,692	949	3,795	3,478.7	0.9
Total Bacillariophyta	449,683	388,017	595,780	477,826.7	96.0	343,428	360,504	330,146	344,692.7	90.5
DIVISION CHLOROPHYTA (Green algae)										
Cladophora sp.			2,846	948.7	0.2			P	P	-
Stigeoclonium sp.	5,692	8,538	13,282	9,170.7	2.0	11,384	38,896	49,332	33,204.0	8.7
Unidentified coccoid							949		316.3	0.1
Unidentified filament	18,025	5,692	2,846	8,854.3	1.8	2,846	949	3,795	2,530.0	0.7
Total Chlorophyta	23,717	14,230	18,974	18,973.7	3.8	14,230	40,794	53,127	36,050.3	9.5

Table II C-35 (Cont.)

Taxon	Stewart Rep 1	Stewart Rep 2	Stewart Rep 3	Stewart Mean	Stewart %RA	Hunter Rep 1	Hunter Rep 2	Hunter Rep 3	Hunter Mean	Hunter %RA
DIVISION CYANOPHYTA (Blue-green algae)										
Chroococcus sp.			P	P	-					
Merismopedia tenuissima			P	P	-					
Oscillatoria sp.			949	316.3	0.1					
Phormidium sp.		949	P	316.3	0.1			P	P	-
Total Cyanophyta		949	949	632.7	0.1			P	P	-
Total Individuals	473,399	403,196	615,703	497,432.7		357,658	401,298	383,273	380,743.0	
Total Taxa	23	25	31	36		25	26	25	34	
Diversity ($\bar{d}$)	2.16	2.18	2.44	2.37		2.88	2.69	2.59	2.78	
Maximum diversity ($\bar{d}_{max}$)	4.17	4.39	4.39	4.91		4.17	4.39	4.17	4.58	
Equitability (%)	51.70	49.63	55.60	48.35		69.06	61.31	62.05	60.68	

P = present but not in count

Table II C-36

Abundance (units/cm^2), Percent Relative Abundance (%RA), and Species Diversity of Periphyton from Artificial Substrates on Piceance Creek, Colorado, at Stewart and Hunter Stations, August 18, 1978

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION BACILLARIOPHYTA (Diatoms)										
Achnanthes lanceolata	1,107	2,372	1,739	1,739.3	3.3	9,487	7,590	9,487	8,854.7	3.1
A. lanceolata var. dubia	16,760	13,756	20,081	16,865.7	32.0	36,999	100,562	61,665	66,408.7	23.2
A. minutissima	3,953	5,099	11,226	6,759.3	12.8	116,690	41,742	116,690	91,707.3	32.1
Amphora perpusilla	632	593	158	461.0	0.9	16,128	4,743	8,538	9,803.0	3.4
A. sp.	474	949	949	790.7	1.5	949	P	P	316.3	0.1
Cocconeis pediculus	1,739	4,743	10,594	5,692.0	10.8	61,665	14,230	30,358	35,417.7	12.4
C. placentula var. euglypta	4,111	4,506	6,166	4,927.7	9.4	12,333	28,461	11,384	17,392.7	6.1
Cyclotella meneghiniana	790	356	316	487.3	0.9	949	2,846	2,846	2,213.7	0.8
Cymatopleura elliptica						P			P	-
Cymbella affinis		118		39.3	0.1			949	316.3	0.1
C. minuta		237		79.0	0.2					
Fragilaria vaucheriae						1,897			632.3	0.2
Gomphonema olivaceum		474	316	263.3	0.5		949	4,744	1,897.7	0.6
G. parvulum	474	712	1,265	817.0	1.6	2,846	3,795	2,846	3,162.3	1.1
G. spp.			316	105.3	0.2	949			316.3	0.1
Gyrosigma sp.			158	52.7	0.1		P		P	-
Hantzschia amphioxys	P			P	-					
Meridion circulare						P			P	-
Navicula capitata		P		P	-					
N. cryptocephala	P			P	-	949			316.3	0.1
N. cryptocephala var. veneta	474	2,846	3,637	2319.0	4.4		1,897	949	948.7	0.3
N. nr. luzonensis	474	356	1,107	645.7	1.2					
N. notha	158	1,067	474	566.3	1.1	2,846	1,897	P	1,581.0	0.6
N. secreta var. apiculata	1,107	4,981	4,269	3,452.3	6.6	3,795	9,487	8,538	7,273.3	2.5

Table II C-36 (Cont.)

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
N. tripunctata var. schizonemoides	632	356	474	487.3	0.9	P		2,846	948.7	0.3
N. viridula var. avenacea		356	158	171.3	0.3	6,641	10,436	15,179	10,752.0	3.8
N. spp.	632	1,186		606.0	1.2		4,743	2,846	2,529.7	0.9
Nitzschia acicularis						P		949	316.3	0.1
N. amphibia		P	158	52.7	0.1	949	949	949	949.0	0.3
N. apiculata		118	316	144.7	0.3	1,897	2,846	2,846	2,529.7	0.9
N. dissipata						949			316.3	0.1
N. linearis						P	1,897		632.3	0.2
N. vermicularis						P			P	-
N. spp.	1,265	1,542	1,581	1,462.7	2.8	5,692	7,590	10,436	7,906.0	2.8
Rhoicospheria curvata	158		158	105.3	0.2					
Surirella ovalis	P	474	158	210.7	0.4	P	949	P	316.3	0.1
S. ovata		118		39.3	0.1	P	1,897	3,795	1,897.3	0.7
S. spp.								P	P	-
Synedra ulna						949	949	P	632.7	0.2
Unidentified centrics	158	118	474	250.0	0.5					
Unidentified pennates	1,107	1,542	790	1,146.3	2.2	5,692		10,436	5,376.0	1.9
Total Bacillariophyta	36,210	48,977	67,042	50,743.0	96.4	291,249	250,455	309,275	283,659.7	99.2
DIVISION CHLOROPHYTA (Green algae)										
Characium sp.			474	158.0	0.3					
Cladophora sp.	158		316	158.0	0.3	949		1,897	948.7	0.3
Closterium sp.		118		39.3	0.1					
Stigeoclonium sp.	632	118		250.0	0.4					
Unidentified filament	790	712	1,265	922.3	1.5		949	2,846	1,265.0	0.4
Total Chlorophyta	1,580	948	2,055	1,527.7	2.6	949	949	4,743	2,213.7	0.8

Table II C-36 (Cont.)

Taxon	Stewart Rep 1	Stewart Rep 2	Stewart Rep 3	Stewart Mean	Stewart %RA	Hunter Rep 1	Hunter Rep 2	Hunter Rep 3	Hunter Mean	Hunter %RA
DIVISION CYANOPHYTA (Blue-green algae)										
Merismopedia punctata		118		39.3	0.1					
Phormidium sp.						P	P		P	-
Total Cyanophyta		118		39.3	0.1	P	P		P	-
DIVISION CHRYSOPHYTA (Yellow-brown algae)										
Dinobryon borgei	316	356	316	329.3	0.6					
Total Chrysophyta	316	356	316	329.3	0.6					
Total Individuals	38,106	50,399	69,413	52,639.3		292,198	251,404	314,018	285.873.3	
Total Taxa	26	32	29	39		30	25	28	37	
Diversity ($\bar{d}$)	3.15	3.72	3.39	3.59		2.83	3.04	3.15	3.32	
Maximum diversity ($\bar{d}_{max}$)	4.52	4.91	4.86	5.17		4.46	4.46	4.52	5.04	
Equitability (R)	69.54	75.77	69.73	69.51		63.46	68.21	69.58	65.88	

P = present but not in count

Table II C-37

Abundance (units/cm^2), Percent Relative Abundance (%RA) and Species Diversity of Periphyton from Artificial Substrates on Piceance Creek, Colorado, at Stewart and Hunter Stations, September 20, 1978

	Stewart					Hunter				
Taxon	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION BACILLARIOPHYTA										
Achnanthes lanceolata	10,587	7,562	4,537	7,562.0	1.8			SAMPLER DESTROYED		
A. lanceolata var. *dubia*	3,025	P	1,512	1,512.3	0.4					
A. minutissima	323,656	302,482	453,724	359,954.0	83.7					
Amphora veneta		1,512		504.0	0.1					
A. sp.	P	P	1,512	503.3	0.1					
Cocconeis pediculus	48,397	13,612	19,661	27,223.3	6.3					
C. placentula var. *euglypta*	6,050	6,050	3,025	5,041.7	1.2					
Cymbella minuta	3,025	P	P	1,008.3	0.2					
Gomphonema subclavatum		P		P						
G. truncatum			4,537	1,512.3	0.4					
G. spp.	1,512	3,025	1,512	2,016.3	0.5					
Navicula cryptocephala var. *veneta*	12,099	P	3,025	5,041.3	1.2					
N. secreta var. *apiculata*	1,512	1,512	3,025	2,016.3	0.5					
N. viridula var. *avenacea*		P		P						
N. spp.	3,025			1,008.3	0.2					
Nitzschia spp.	7,562	15,124	4,537	9,074.3	2.1					
Unidentified pennates	4,537	4,537	1,512	3,528.7	0.8					
Total Bacillariophyta	424,988	355,417	502,121	427,508.7	99.4					
DIVISION CHLOROPHYTA										
Oedogonium sp.		P								
Stigeoclonium sp.	P	P	1,512	504.0	0.1					
Unidentified coccoid		6,050		2,016.7	0.5					
Total Chlorophyta	P	6,050	1,512	2,520.7	0.6					

Table II C-37 (Cont.)

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION CYANOPHYTA										
Merismopedia punctata			P	P				SAMPLER DESTROYED		
Phormidium sp.	P	P		P						
Total Cyanophyta	P	P	P	P						
DIVISION CHRYSOPHYTA										
Dinobryon sp.			P	P						
Total Chrysophyta			P	P						
Total Individuals	424,988	361,467	503,633	430,029.3						
Total Taxa	15	19	16	22						
Diversity ($\bar{d}$)	1.40	1.10	0.76	1.14						
Maximum Diversity ($\bar{d}$ max)	3.58	3.32	3.70	4.09						
Equitability (%)	39.19	33.20	20.55	27.77						

P = Present

Table II C-38

Abundance (units/cm^2), Percent Relative Abundance (%RA) and Species Diversity of Periphyton from Artificial Substrates on Piceance Creek, Colorado, at Stewart and Hunter Stations, October 18, 1978

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION BACILLARIOPHYTA (Diatoms)										
Achnanthes lanceolata		2,269	P	756.3	0.2		1,138		379.3	0.6
A. lanceolata var. dubia	3,403	4,537		2,646.7	0.7	9,107	3,415	3,890	5,470.7	8.5
A. minutissima	284,712	309,666	243,876	279,418.0	74.8	1,708	1,328	569	1,201.7	1.9
Amphora ovalis	P	1,134	2,269	1,134.3	0.3		190	95	95.0	0.1
A. perpusilla						379			126.3	0.2
Caloneis amphisbaena		P		P		P		95	31.7	<0.1
Cocconeis pecidulus	28,358	23,820	29,492	27,223.3	7.3	4,933	3,605	2,656	3,731.3	5.8
C placentula	5,672	18,149	3,403	9,074.7	2.4	P			P	
C. placentula var. euglypta		P		P		17,076	20,871	14,230	17,329.3	26.9
Cyclotella meneghiniana		2,269	3,403	1,890.7	0.5	1,897	1,138	1,138	1,391.0	2.2
Cylindrotheca gracilis								P	P	
Cymatopleura elliptica								P	P	
Cymbella minuta	2,269	1,134	5,672	3,025.0	0.8					
C. tumida	P	P	3,403	1,134.3	0.3					
Diatoma tenue var. elongatum	4,537	P	P	1,512.3	0.4					
D. vulgare		P	P	P						
Epithemia turgida		P		P						
Fragilaria crotonensis		P		P						
Gomphonema acuminatum	1,134			378.0	0.1					
G. olivaceum	1,134		3,403	1,512.3	0.4	949	569	379	623.3	1.0
G. parvulum	1,134	1,134		756.0	0.2	190		95	95.0	0.1
G. subclavatum	P			P						
G truncatum	1,134	5,672	22,686	9,830.7	2.6					

Table II C-38 (Cont.)

Taxon	Stewart Rep 1	Stewart Rep 2	Stewart Rep 3	Stewart Mean	Stewart %RA	Hunter Rep 1	Hunter Rep 2	Hunter Rep 3	Hunter Mean	Hunter %RA
G spp.	7,940	2,269	2,269	4,159.3	1.1		379	569	316.0	0.5
Gyrosigma sp.						P	P	95	31.7	<0.1
Melosira varians								95	31.7	<0.1
Navicula capitata		P		P						
N. cryptocephala var. veneta	7,940	1,134	17,015	8,696.3	2.3	2,467	759	3,131	2,119.0	3.3
N. pupula var. rectangularis								95	31.7	<0.1
N. secreta var. apiculata	2,269	10,209	21,418	10,965.3	2.9	8,918	4,174	6,356	6,482.7	10.0
N. tripunctata var. schizonemoides	1,134	2,269	1,134	1,512.3	0.4					
N. viridula var. avenacea	P	P	P	P		24,097	18,974	11,479	18,183.3	28.2
N. spp.			1,134	378.0	0.1	1,328	379	1,423	1,043.3	1.6
Nitzschia acicularis	P	P	1,134	378.0	0.1	190		190	126.7	0.2
N. apiculata		P	P	P		190	P	379	189.7	0.3
N. dissipata	P			P						
N. hungarica		P		P		190			63.3	0.1
N. sigmoidea						379	379	285	347.7	0.5
N. vitrea			P	P						
N. spp.	3,403	3,403	4,537	3,781.0	1.0	2,467	3,415	1,423	2,435.0	3.8
Pinnularia sp.		P	1,134	378.0	0.1					
Rhoicospheria curvata			P	P		379	190	190	253.0	0.4
Rhopalodia gibba var. ventricosa			P	P						
Stauroneis anceps		P		P						
Surirella ovalis							P		P	
S. ovata						379	190	95	221.3	0.3
S. sp.						P	P		P	
Synedra ulna	P	P	P	P			P		P	
S. sp.	3,403		1,134	1,512.3	0.4			P	P	
Unidentified pennates						759	759	2,087	1,201.7	1.9
Total Bacillariophyta	359,576	389,068	367,516	372,053.3	99.6	77,982	61,852	51,039	63,624.3	98.6

Table II C-38 (Cont.)

Taxon	Stewart					Hunter				
	Rep 1	Rep 2	Rep 3	Mean	%RA	Rep 1	Rep 2	Rep 3	Mean	%RA
DIVISION CHLOROPHYTA (Green algae)										
Closterium sp.						P	P	P	P	
Oedogonium sp.		P		P		379	P		126.3	0.2
Scendesmus acutus			P	P						
Stigeoclonium sp.	2,269	1,134	1,134	1,512.3	0.4			190	63.3	0.1
Ulothrix sp.		P	P	P						
Unidentified flagellate		P		P						
Unidentified filament	P			P		379			126.3	0.2
Total Chlorophyta	2,269	1,134	1,134	1,512.3	0.4	758	P	190	316.0	0.5
DIVISION CYANOPHYTA (Blue-green algae)										
Chroococcus sp.								285	95.6	0.1
Unidentified filament			P	P						
Total Cyanophyta			P	P				285	95.0	0.1
DIVISION CHRYSOPHYTA										
Unidentified coccoid							1,518		506.0	0.8
Total Chrysophyta							1,518		506.0	0.8
Total Individuals	361,845	390,202	368,651	373,566.0		78,742	63,373	51,514	64,543.0	
Total Taxa	24	34	31	44		27	26	30	40	
Diversity ($\bar{d}$)	1.43	1.37	2.03	1.7057		3.08	2.87	3.25	3.15	
Maximum diversity ($\bar{d}$ max)	4.09	4.00	4.25	4.58		4.46	4.25	4.70	5.00	
Equitability (%)	35.06	34.32	47.89	37.20		68.99	67.62	69.10	69.92	

P = present but not encountered while counting

Table II C-39

Biomass (mg/cm^2) of periphyton from artificial substrates on Piceance Creek, Colorado at Stewart and Hunter Stations during May and June, 1978

Location	Ash-free Dry Weight Biomass (mg/cm^2)							
	May 18				June 20			
	Rep 1	Rep 2	Rep 3	Mean	Rep 1	Rep 2	Rep 3	Mean
Stewart	0.56	0.48	0.53	0.52	0.35	0.50	0.40	0.42
Hunter	0.69	0.61	0.69	0.66	1.36	2.05	1.41	1.61

Table II C-40

Biomass (mg/cm^2) of Periphyton from Artificial Substrates on Piceance Creek, Colorado at Stewart and Hunter Stations During July and August, 1978

	Ash-free Dry Weight Biomass (mg/cm^2)							
Location	July 19				August 18			
	Rep 4	Rep 5	Rep 6	Mean	Rep 4	Rep 5	Rep 6	Mean
Stewart	0.26	0.27	0.19	0.24	0.08	0.04	0.03	0.05
Hunter	0.49	0.24	0.39	0.37	0.27	0.41	0.16	0.28

Table II C-41

Biomass (mg/cm^2) of periphyton from artificial substrates on Piceance Creek, Colorado at Stewart and Hunter Stations during September and October, 1978

Location	Ash-free Dry Weight Biomass (mg/cm^2)							
	September 20				October 18			
	Rep 1	Rep 2	Rep 3	Mean	Rep 1	Rep 2	Rep 3	Mean
Stewart	0.32	0.42	0.30	0.35	0.15	0.18	0.06	0.13
Hunter	SAMPLER DESTROYED				0.19	0.19	0.29	0.22

Table II C-42

Biomass (mg/cm^2) of periphyton from artificial substrates on Piceance Creek, Colorado at Stewart and Hunter stations during May and June, 1978.

Location	Ash-free Dry Weight Biomass (mg/cm^2)							
	May 18				June 20			
	Rep 1	Rep 2	Rep 3	Mean	Rep 1	Rep 2	Rep 3	Mean
Stewart	0.56	0.48	0.53	0.52	0.35	0.50	0.40	0.42
Hunter	0.69	0.61	0.69	0.66	1.36	2.05	1.41	1.61

40

Density data for June samples were rounded to three significant digits while May, July, August, September and October density were reported in an unrounded integer form to facilitate statistical manipulations. No more than three digits, however, should be considered significant.

Biomass - Air dried slides were transferred into porcelain drying dishes and sample containers were rinsed, transferring dislodged material into the drying dish. Each sample was dried to a constant weight of 105°C and weighed to the nearest milligram (dry weight). Then each sample was ashed at 500°C for a minimum of four hours. Samples were rewet upon cooling to replace their water of hydration, redried to a constant weight of 105°C and weighed again (ash weight).

Biomass was calculated according to the following equation:

$$\text{mg ash free dry weight/cm}^2 = \frac{Wd - Wa}{As}$$

Where: Wd = dry weight (mg) + tare
Wa = ash weight (mg) + tare
As = area of slide (cm^2)

Benthos

Tables II C-43 and II C-44 summarize the benthic taxa collected at two Piceance Creek sampling stations (GS09306007 and GS0930601) during February - May, 1978. Taxa were summarized as they appearred in the U.S. Geological Survey raw data forms, i.e., by major groupings (Ephemeroptera, Odonata, etc.) and by the lowest taxonomic level of identification (Genus-species).

Calculation of community diversity parameters ($\bar{d}$, $\bar{d}_{max}$, and e) were based upon the Shannon-Weiner (1973) function, provisionally recommended by the U.S. Environmental Protection Agency (Weber 1973). Computational equations were as follows:

$$\bar{d} = \sum_{1}^{s} \left(\frac{ni}{N} \log_2 \frac{ni}{N}\right)$$

Where: $\bar{d}$ = community diversity index
N = total number of organisms per sample
ni= number of individuals per taxon
s = total number of taxa

$$\bar{d}_{max} = \log_2 S$$

Where: $\bar{d}_{max}$ = maximum diversity
S = number of taxa

$$e = \frac{\bar{d}}{d_{max}} (100)$$

Where: e = equitability (range 0 to 100)

$\bar{d}$ = calculated species diversity

$\bar{d}_{max}$ = calculated maximum diversity

Table II C-43

Analysis of Macroinvertebrates Collected by Surber Sampler,
Station GS09306007; February-August, 1978

Taxa	February no./ft² (%RA)	March no./ft² (%RA)	April no./ft² (%RA)	May no./ft² (%RA)	June no./ft² (%RA)	July no./ft² (%RA)	August no./ft²(%RA)
Annelida							
Tubifex tubifex			2 (50.00)				
Total Annelida			2 (50.00)				
Ephemeroptera							
Baetis sp.	304(39.74)	10(41.67)		33(42.86)			
Ephemerella infrequens	3(0.39)			7(9.09)			
E. mollitia				1(1.30)			
Tricorythodes fallax	8(1.05)						
Total Ephemeroptera	315(41.18)	10(41.67)		41(53.25)			
Odonata							
Ophiogomphus severus		1(4.17)					
Total Ononata		1(4.17)					
Plecoptera							
Isoperla patricia				13(16.88)			
Pictetiella expansia	31(4.05)	1(4.17)					
Total Plecoptera	31(4.05)	1(4.17)		13(16.88)			
Trichoptera							
Hesperophylax sp.				2(2.60)			
Hydropsyche sp.	4(0.52)			16(20.78)			
Total Trichoptera	4(0.52)			18(23.38)			
Coleoptera							
Optioservus sp.	8(1.05)			2(2.60)			
Total Coleoptera	8(1.05)			2(2.60)			

Table II C-43 (Cont.)

Taxa	Date February no./ft^2 (%RA)	March no./ft^2 (%RA)	April no./ft^2 (%RA)	May no./ft^2 (%RA)	June no./ft^2 (%RA)	July no./ft^2 (%RA)	August no./ft^2 (%RA)
Diptera							
Chironomidae							
Arcto-Conchapelopia sp.	17(2.22)						
Chironomus sp.		1(4.17)					
Cricotopus sp. 1	163(21.31)	2(8.33)					
Cricotopus sp. 2	125(16.34)						
Cricotopus sp (pupae)	5(0.65)						
Diamesia sp. 1	19(2.48)						
Diamesia sp. 2	11(1.44)						
Eukiefferiella sp. 1	45(5.88)	4(16.67)		2(2.60)			
Eukiefferiella sp. 3	7(0.91)		2(50.00)				
Micropsectra sp.	3(0.39)	1(4.17)					
Odontomesa sp.	4(0.52)	2(8.33)					
Phaenopsectra sp.	1(0.13)						
Psectrotanypus sp.		1(4.17)					
Total Chironomidae	400(52.29)	11(45.83)	2(50.00)	2(2.60)			
Other							
Atrichopogon sp.		1(4.17)					
Dicranota sp.	4(0.52)						
Prosimulium sp.	1(0.13)						
Tipula sp.	2(0.26)			1(1.30)			
Total Other	7(0.91)	1(4.17)		1(1.30)			
Total Taxa	20	10	2	9			
Total no./ft^2	765	24	4	77			
$\bar{d}$	2.68	2.70	1.00	2.32			
$\bar{d}$ max	4.32	3.32	1.00	3.17			
e	61.96	81.30	100.00	73.06			

Table II C-44

Analysis of Macroinvertebrates Collected by Surber Sampler,
Station GS09306061; February-August, 1978

Taxa	Date						
	February no./ft^2 (%RA)	March no./ft^2 (%RA)	April no./ft^2 (%RA)	May no./ft^2 (%RA)	June no./ft^2 (%RA)	July no./ft^2 (%RA)	August no./ft^2 (%RA)
Annelida							
Tubifex tubifex		4 (11.11)					
Total Annelida		4 (11.11)					
Hirudinea							
Helobdella stagnalis	1 (0.06)	1 (2.78)		2 (1.46)			
Total Hirudinea	1 (0.06)	1 (2.78)		2 (1.46)			
Acari							
Sperchon sp.	5 (0.29)			1 (0.73)			
Total Acari	5 (0.29)			1 (0.73)			
Ephemeroptera							
Baetis sp.	815 (48.11)	6 (16.67)	5 (62.50)	88 (64.23)			
Ephemerella infrequens	4 (0.24)			1 (0.73)			
Tricorythodes fallax	7 (0.41)						
Total Ephemeroptera	826 (48.76)	6 (16.67)	5 (62.50)	89 (64.96)			
Plecoptera							
Isoperla patricia				11 (8.03)			
Pictetiella expansia	20 (1.18)	2 (5.56)	1 (12.50)				
Total Plecoptera	20 (1.18)	2 (5.56)	1 (12.50)	11 (8.03)			
Trichoptera							
Hesperophylax sp.	2 (0.12)		1 (12.50)	8 (5.84)			
Hydropsyche sp.	3 (0.18)			8 (5.84)			
Total Trichoptera	5 (0.29)		1 (12.50)	16 (11.68)			
Coleoptera							
Optioservus sp.	8 (0.47)						
Total Coleoptera	8 (0.47)						

Table II C-44 (Cont.)

Taxa	Date						
	February no./ft^2 (%RA)	March no./ft^2 (%RA)	April no./ft^2 (%RA)	May no./ft^2 (%RA)	June no./ft^2 (%RA)	July no./ft^2 (%RA)	August no./ft^2 (%RA)
Diptera							
Chironomidae							
Arcto-Conchapelopia sp.	13 (0.77)						
Chironomus sp.		1 (2.78)					
Cricotopus sp. 1	191 (11.27)	1 (2.78)		5 (3.65)			
Cricotopus sp. 2	85 (5.02)	1 (2.78)		2 (1.46)			
Cricotopus sp. (pupae)	5 (0.29)						
Diamesia sp. 2	43 (2.54)	3 (8.33)	1 (12.50)				
Eukiefferiella sp. 1	212 (12.51)	2 (5.56)		2 (1.46)			
Eukiefferiella sp. 2		2 (5.56)					
Eukiefferiella sp. 3	10 (0.59)	2 (5.56)					
Micropsectra sp.	2 (0.19)	1 (2.78)					
Odontomesa sp.	11 (0.65)	5 (13.89)					
Orthocladius sp.				2 (1.46)			
Phaenopsectra sp.		4 (11.11)					
P. olivaceae		1 (2,78)					
Total Chironomidae	572 (33.77)	23 (63.89)	1 (12.50)	11 (8.03)			
Diptera							
Other							
Dicranota sp.	2 (0.19)			1 (0.73)			
Limnophora sp.	1 (0.06)						
Prosimulium sp.	249 (14.70)			1 (0.73)			
Tipula sp.	5 (0.29)			5 (3.65)			
Total Other	257 (15.17)			7 (5.11)			
Total Taxa	22	15	4	14			
Total no./ft^2	1,694	36	8	137			
$\bar{d}$	2.44	3.62	1.55	2.09			
e	54.80	92.60	77.44	54.97			

Diatoms, which accounted for a substantial proportion of the periphyton population, was identified from permanent Hyrax slide mounts. Duplicate Hyrax mounts were prepared from a composite of the three replicates of each station for each sampling period. Mounts were made from small aliquots taken from the samples remaining after the removal of the volume used in the sedimentation procedure. These were composited in a 15 ml test tube, and subjected to sulfuric acid-potassium dichromate digestion (modified from Patrick and Reimer 1966). Following cooling, samples were centrifuged and an aspirator was used to remove the supernatant after which the frustules were resuspended in distilled water. This was repeated several times until a clear solution with approximately neutral pH remained. One or two drops of the diatom suspension were placed upon clean 25 mm cover slips and heated to dryness after which they were inverted upon a drop of Hyrax (Custom Research and Development, Inc.), a high resolution mounting medium (N_d = 1.63 to 1.71), on labeled microscope slides. Diatoms were identified with an Olympus Vanox phase contrast microscope at magnifications of 600 - 1500X.

Periphyton enumeration utilized the inverted microscope method described by Utermoehl (1958) and outlined in Vollenweider (1969). Counts were made from the sedimented samples on the inverted microscope at 560X counting strips with an area of 2.09 mm^2. In accordance with procedures suggested by Margalef (1974), at least 100 individuals of each "important" taxon were counted where practicable. For each sample, at least one randomly located counting strip was examined. The counting units utilized were:

Unicells - each cell
Diatoms - each complete frustule (2 valves)
Filaments - 100 micron length
Discrete colonies - each 4 to 64 cell colony
Indiscrete colonies - every 8 cells
Dence colonies - every 50 cells

Examples of discrete colonial forms include Pediastrum and Scenedesmus. Indiscrete colonial forms include Chroococcus and Merismopedia. Examples of dense colonies are Microcystis, Coelosphaerium, and other such coccoid blue-greens.

All identifications, counts, and other pertinent data were recorded on standard algal bench forms. Replicate data were transposed to summary data forms for presentation in this report. Standard phycological references were used in the identifications of the periphyton (see References and Literature Cited).

Phytoplankton densities were calculated according to the following equation:

$$\text{Units/cm}^2 = \frac{Ct \times Ac \times Vo}{Ag \times Ng \times Vs \times As}$$

Where:
Ct = Count in units
Ac = Area of sedimentation chamber (mm^2)
Ag = Area of counting strip (mm^2)
Ng = Number of strips
Vo = Original sample volume (ml)
Vs = Sedimentation volume (ml)
As = Area scraped from slide (m^2)

Results and Discussion

Periphyton - May and June

Approximately 60 taxa were identified from the May and June, 1978 samplings of Piceance Creek, Colorado. Tables II C-33 and II C-34 list the taxa and their densities.

In May periphyton density was extremely low with periphyton being slightly more dense at the upstream station (Stewart). The mean total densities were 671 units/cm^2 and 467 units/cm^2 for Stewart and Hunter Stations respectively.

In June densities were much higher. The total mean density was slightly higher at the downstream station, 753,400 units/cm^2 and 809,100 units/cm^2 for Stewart and Hunter Stations respectively.

Periphyton density data recorded for Piceance Creek in May 1977 shows values between the May and June sampling for 1978. Total mean densities were 130,000 units/cm^2 and 60,200 units/cm^2 for Stewart and Hunter Stations respectively. There doesn't appear to be any constant trend for periphyton density differences between stations.

All samples were dominated by diatoms, representing over 98% of the total density. The diatoms found in abundance are characteristic of waters with a high mineral content.

In May the communities of the two stations were very similar with *Navicula secreta* var. *apiculata*, *Navicula tripunctata* var. *schizonemoides*, *Nitzchia palea*, and other *Navicula* and *Nitzchia* species dominating (at densities greater than 5% of the mean total abundance). *Navicula cryptocephala* var. *veneta* reached dominance only at the Stewart station while *Achnanthes minutissima* was a dominant only at Hunter station.

In June the two stations were dominated by *Achnanthes minutissima*, *Nitzschia acicularis*, *Nitzschia palea* and other *Nitzschia* species. *Navicula secreta* var. *apiculata* was dominant only at the Stewart station while *Achnanthes lanceolata* var. *dubia* and *Navicula viridula* var. *avenacea* were dominant only at Hunter station.

In contrast to these data, the 1977 May samples were dominated exclusively by *Navicula viridula* var. *avenacea* at both stations. Variations in flow rate and temperature may account for some of these community differences.

Shannon-Wiener species diversity indices were calculated for all samples and are recorded in Tables II C-33 and II C-34. Diversity was highestin May. No trends were observed between stations.

Biomass was determined for each station at each sample site (Table II C-42). Biomass data reflects the size of the organisms in a community as well as their quantity. In May Biomass differences between stations was slight, Hunter station having the greater value. In June, biomass at the Stewart station was slightly less than the value determined for the May samples while the biomass at the Hunter station more than doubled. Productivity as determined by the ash-free biomass method was highest at the Hunter station in both May and June.

A total of 90 taxa have been identified from Hunter and Stewart stations on Piceance Creek, Colorado (Tables II C-33 through II C-36). Species diversity and biomass data are summarized for the study in Tables II C-31 and II C-32.

In July and August a total of 56 taxa were identified. Tables II C-35 and II C-36 list the taxa and their densities.

In July periphyton densities were lower than those reported for the previous month. Total mean densities were approximately half as large as the total mean densities reported for June. The total mean density at the Stewart station, 497,433 units/cm^2, was slightly higher than at the Hunter station, 380,743 units/cm^2.

In August, total densities were similar to those in July at the Hunter station while total density values were much lower at the upstream Stewart station. The total mean densities were 52,639 units/cm^2 and 285,873 units/cm^2 at Stewart and Hunter stations respectively.

Like the previous periphyton samples from these stations, the July and August samples were dominated by diatoms.

In July, the dominant taxa (present at densities greater than 5% of the total mean abundance) were diatoms, Achnanthes lanceolata, Achnanthes lanceolata var. dubia, and Achnanthes minutissima. In addition the green alga, Stigeoclonium sp., was dominant at the Hunter station.

In August the algal community at both stations were dominated by the diatoms, Achnanthes lanceolata var. dubia, Achnanthes minutissima, Cocconeis pediculus and Cocconeis placentula var. euglypta. At Stewart station Navicula secreta var. apiculata also was a dominant.

In comparing the periphyton communities observed in previous months this sampling year, a seasonal community alteration is apparent (Table II C-30). In May Navicula and Nitzschia species were dominant while in August the dominance shifted to Achnanthes and Cocconeis species. Seasonal variation along with some annual variation in the periphyton community is to be expected.

Shannon-Weiner species diversity indices were calculated for all samples and are reported in Tables II C-35 and II C-36. Diversity was lower in July than in May, June or August (Table II C-31). Diversity values increased slightly in August from the July minimum. No trends were observed between stations.

Biomass determinations do not follow periphyton abundance trends, reflecting variations in the size and condition of the constituents of the community. At Stewart Station biomass steadily decreased from May (0.52 mg/cm^2) to August (0.05 mg/cm^2) (Table II C-32). At Hunter station, biomass increased to a maximum in June and steadily decreased in July and August. During the four sample dates between May and August, productivity as determined by the biomass was highest at the Hunter station.

In September and October samples, a total of 66 taxa were identified. Most of the taxa were diatoms, represented by 53 taxa. Table II C-37 and II C-38 list the taxa and their densities.

In September only Stewart station was sampled due to the loss of the Hunter station sampler. Density values at Stewart station were much higher than those reported for August but similar to July's total density values. The mean total periphyton density was 430,029.3 unit/cm^2.

In October periphyton density was higher at Stewart station. The mean total periphyton density at Stewart station, 373,566.0 units/cm^2, was similar to the September periphyton densities. At Hunter station the mean total density was the lowest recorded for the study, 64,543.0 units/cm^2.

Periphyton density data recorded for Piceance Creek in October 1977 showed values nearly twice as high as the October 1978 samples. Total mean densities were 598,800 units/cm^2 and 124,300 units/cm^2 for Stewart and Hunter stations respectively. In both 1977 and 1978 the downstream station, Hunter, had the lower periphyton density.

Diatoms were the most abundant group in all samples taken in September and October, representing relative abundances greater than 98%.

In September at Stewart station, the dominant taxa (present at densities greater than 5% of the total mean abundance) were the diatoms, Achnanthes minutissima and Cocconeis pediculus, representing relative abundances of 83.7% and 6.3% respectively.

In October, Stewart station periphyton was again dominated by Achnanthes minutissima (74.8%) and Cocconeis pediculus (7.3%). At Hunter station the diatoms, Navicula viridula var. avenacea (28.2%), Cocconeis placentula var. euglypta (26.9%), Navicula secreta var. apiculata (10.0%), Achnanthes lanceolata var. dubia (8.5%), and Cocconeis pediculus (5.8%) dominated the periphyton by abundance.

In October 1977, the Hunter station periphyton community was drastically different than the October 1978 community while at Stewart station the 1977 and 1978 communities were more similar. In 1977 Navicula viridula var. avenacea, Navicula secreta var. apiculata, and Nitzschia spp. dominated at Hunter station. At Stewart station Navicula secreta var. apiculata, Navicula viridula var. avenacea, Cocconeis placentula, Nitzschia spp., and Nitzschia acicularis were the dominant taxa.

Shannon-Wiener species diversity indices (Shannon 1948) were calculated for all September and October 1978 samples and are reported in Tables II C-37 and II C-38. Diversity values for September at Stewart station were markedly lower than observed previously from that location (Table II C-31). In October diversity at Stewart station increased slightly, but was still much lower than observed at Hunter station.

Periphyton biomass was determined for each of three replicates at each station for September and October samples (Table II C-41). Biomass determinations do not follow periphyton abundance trends, reflecting variations in size and condition of the constituents of the community. In October the biomass at

Stewart station was less than during September. Biomass at Hunter station in October was slightly higher than at Stewart station.

A total of 106 taxa were identified from Hunter and Stewart stations in Piceance Creek, Colorado from the monthly samples taken between May and October 1978 (Tables II C-33 through II C-38). These taxa were comprised of 84 diatom taxa (Bacillariophyta), 12 green algae taxa (Chlorophyta), six blue-green algae taxa taxa (Chrysophyta). Table II C-30 lists the taxa observed and their months and locations of occurrence and dominance during the study. Species diversity and biomass data for the six month study are summarized in Tables II C-31 and II C-32.

Variations in periphyton density occurred during the study period with minima recorded in May and maxima recorded the following month, June. Extreme station density differences occurred in August when the total density at Stewart station was nearly five times less than at Hunter station and in October when the total density at Hunter station was over five times less than at Stewart station.

In comparing the periphyton communities observed throughout the six month study period, a seasonal variation is apparent. In May and June the periphyton of both stations was predominately Navicula and Nitzschia species. In July, August and September, both stations were predominated by Achnanthes species with Cocconeis species becoming codominant in August and September. October was the only month where significant differences were observed in the periphyton constituents of the two stations. Stewart station continued to be dominated by Achnanthes and Cocconeis species while at Hunter station the importance of Achnanthes species was diminished and Navicula and Cocconeis species occurred as dominants in the periphyton.

Annual variations also seem to be occurring in Piceance Creek based on comparisons of 1978 sampling to spring and fall periphyton analyses in 1977. In May 1977 Navicula viridula var. avenacea dominated while in 1978 other Navicula species and Nitzschia species predominated. In October 1977 Navicula and Nitzschia species dominated along with Cocconeis placentula at Hunter station. The October 1978 samples at Hunter station were similar to those observed in 1977. Stewart station, however, was quite dissimilar with Achnanthes and Cocconeis species dominating.

The known ecological requirements and tolerances were similar for the diatom species found to dominate at some time in the study. They attain best development in alkaline waters and are common in oligotrophic and mesotrophic rivers of this region (Lowe 1974 and Patrick and Reimer 1966). The Nitzschia species that dominated in spring and summer, however, are generally more common in standing waters.

Species diversity values for the study are summarized in Table II C-31. Diversity values decreased steadily at both stations between May and July then increased again in August. In September and October at Stewart station the diversity was extremely low. In October the differences between stations apparent from the dominant taxa was also visible when comparing diversity values with Hunter station diversity being considerably higher.

Biomass data is summarized for the study in Table II C-32. At Stewart station mean biomass steadily decreased from 0.52 mg/cm^2 in May to 0.05 mg/cm^2 in August, increased to 0.35 mg/cm^2 in September, then decreased again to 0.13 mg/cm^2 in October. At Hunter station, biomass increased to a maximum in June (1.66 mg/cm^2

and steadily decreased to the minimum recorded in October (0.22 mg/cm^2). During the six month study, productivity as determined by the biomass was higher at Hunter station.

Station GS09306007

Benthos

Surber sampling at this Piceance Creek location collected a total of 27 taxa of benthic macroinvertebrates (Table II C-43). Total densities varied from 765 organisms per ft^2 (20 taxa) in February to 4 organisms/ft^2 (two taxa) in April.

In February, the sample was dominated by larval Chironomidae (52.29 percent relative abundance) and immature Ephemeroptera (41.18 percent relative abundance). *Cricotopus* sp. 1 and *Cricotopus* sp. 2 were the predominant chironomid larvae with densities of 163/ft^2 and 125/ft^2, respectively. Together, these taxa comprised over 37 percent relative abundance. *Baetis* sp. was the predominant mayfly (Ephemeroptera), and comprised approximately 40 percent relative abundance (304/ft^2).

In March, only 24 organisms/ft^2 (representing 10 taxa) were collected. Of these, approximately 46 percent were midges (Chironomidae) and 42 percent were mayflies. *Cricotopus* sp. 1 represented only 8.33 percent relative abundance, while *Cricotopus* sp. 2 was not collected. Midge larvae which were numerically unimportant in February were more numerous in this sample, i.e., *Eukrefferiella* sp. 1 (4/ft^2, 16.67 percent) and *Odontomesa* (2/ft^2, 8.33 percent). The taxa, however, were not as numerous at this time as during the previous month even though they were more relatively abundant. *Baetis* was again the most abundant mayfly naiad, with 10 individuals comprising over 41 percent relative abundance.

In April, only 2 taxa and 4 individuals were collected, i.e., the annelid *Tubifex tubifex* and *Eukiefferiella* sp. 3.

In May, nine taxa accounted for 77 individuals of which 53 percent were mayflies, 17 percent were stoneflies (Plecoptera), and 23 percent were caddisflies (Trichoptera). Midge larvae were collected in low numbers at this time. The predominant mayflies were *Baetis* (33/ft^2, 42.86 percent) and *Ephemerella infrequens* (7/ft^2, 9.09 percent). *Isoperla patricia* was the only stonefly collected, with 13 individuals comprising 16.88 percent relative abundance. *Hydropsyche* was the most important caddisfly, accounting for almost 21 percent relative abundance (16/ft^2).

At this sampling station during this time period, community diversity ($\bar{d}$) ranged from 2.70 in March (10 taxa, 24 individuals) to 1.00 in April (2 taxa, 4 individuals) (Table II C-32). Maximum diversity ($\bar{d}_{max}$) ranged from 4.32 in February (20 taxa, 765 individuals) to 1.00 in April. Equitability (3) ranged from 100 percent in April to 61.96 percent in February.

Station GS09306061

Sampling at this location collected a total of 29 benthic taxa (Table II C-44). Total densities varied from 1,694 per ft^2 in February to 8 per ft^2 in April.

In February, mayfly naiads were the most abundant organisms with a total density of 826/ft^2 (48.76 percent). Of these, *Baetis* was the most numerically important with 815 individuals comprising over 48 percent relative abundance. Total chironomid density was 572 individuals which accounted for almost 34 percent relative abundance. As at GS09306007, *Cricotopus* sp. 1 and *Eukiefferiella* sp. 1

were the most numerically important midge larvae, with $191/ft^2$ and $212/ft^2$, respectively. Blackfly larvae (Prosimulium) comprised over 14 percent relative abundance (249 individuals). In March, 15 taxa accounted for 36 individuals. Baetis and Tubifex were the most numerous organisms, with $6/ft^2$ (16.67 percent) and $4/ft^2$ (11.11 percent), respectively. Midge larvae comprised almost 64 percent relative abundance (23 individuals) of which Diamesa sp. 2 ($3/ft^2$, 8.33 percent) and Phaenopsectra ($4/ft^2$, 11.11 percent) were the most abundant taxa. Stoneflies (Pictetiella expansia) comprised 5.56 percent relative abundance (2 individuals).

In April, only 8 organisms were collected (4 taxa), of which five were Baetis.

In May, 137 organisms were collected representing 14 taxa. Of these, Baetis was the most numerous benthic form, with 88 individuals comprising over 64 percent relative abundance. Only 11 midge larvae were collected, with no individual taxon exceeding 4 percent relative abundance. Isoperla patricia (Plecoptera) comprised 8 percent (11 individuals), while Hesperophylax and Hydropsyche (Trichoptera) each comprised 5.84 percent (8 individuals). Diptera other than midges were collected in relatively low numbers ($7/ft^2$) with no individual taxon accounting for greater than 3.65 percent relative abundance.

Community diversity ($\bar{d}$) values at this sampling station (Table II C-45) ranged from 1.55 (4 taxa, 8 individuals) in April to 3.62 in March (15 taxa, 36 individuals). Maximum diversity ($\bar{d}_{max}$) varied from 2.00 in April to 4.46 in February (22 taxa, 1,694 individuals). Equitability (e) varied from 54.80 in February to 92.60 in March.

Ecological Evaluations

A total of 34 benthic taxa were collected from February through May, 1978 at both sampling stations. Of these, only 16 taxa achieved densities which may be considered to be ecologically important, i.e., equalled or exceeded 5 percent relative abundance.

At Station GS09306007, the most consistently important organisms were mayfly naiads (Baetis), with relative abundance values approaching or exceeding 40 percent. The genus is widely distributed and typically collected in water with some current due to its relatively high dissolved oxygen requirements. It is, therefore, usually associated with rigid substrated. Baetis is usually considered to be relatively intolerant of most forms of cultural pollution and, as such, is normally indicative of clean water.

Tubifex tubifex was collected only in April at this location and then in low numbers ($2/ft^2$). Overall, this organism does not appear to be characteristic of the benthic community found at this station.

Other than Baetis, no other taxa were collected at this location in consistently high numbers. Conversely, many taxa were collected in noticable densities only once during the four months and taken in low numbers, if at all, at other times. This may possibly be attributed to relatively low intensity sampling (one sample per month) and the normally patchy distribution of stream macroinvertebrates.

At Station GS09306061, Baetis was similarly the most consistently important benthic organism collected, with relative abundance values varying from approximately 16 to over 64 percent. Tubifex was collected only in March, and then in low numbers ($4/ft^2$). Other taxa collected consistently, albeit in widely

Table II C-45

Macroinvertebrate Diversity Analysis, Piceance Creek, 1978

Station		Date						
		February	March	April	May	June	July	August
GS09306007	$\bar{d}$	2.68	2.70	1.00	2.32			
	$\bar{d}_{max}$	4.32	3.32	1.00	3.17			
	e	61.96	81.30	100.00	73.06			
GS0930601	$\bar{d}$	2.44	3.62	1.55	2.09			
	$\bar{d}_{max}$	4.46	3.91	2.00	3.81			
	e	54.80	92.60	77.44	54.97			

varying densities, include *Pictetiella expansia*, *Hesperophylax*, *Cricotopus* (species 1 and 2), and *Eukeifferiella* species 1.

Overall, the macroinvertebrate communities of both locations may be characterized as *Baetis*-Chironomidae communities, with occasionally important densities of Trichoptera. The predominance of such organisms is indicative of well-oxygenated streams with substrates consisting predominantly of stones, rubble, and other such rigid constituents.

Community diversity values ($\bar{d}$) reflect community responses to both natural and culturally induced stresses. Wilhm (1970) has indicated that in clean waters, $\bar{d}$ usually varies between 3 and 4, whereas in water containing a wide variety of organic and inorganic pollutants, $\bar{d}$ is generally less than 1. Values between these extremes are indicative of moderately polluted, or mesotrophic, conditions. It should be understood, however, that $\bar{d}$ values also reflect such natural processes as substrate composition, the natural history of the organisms in the community, hydrologic conditions, season, etc. Accordingly, the low diversity values derived for both locations in April probably reflect the naturally disturbed community during spring runoff along with the difficulties inherent in sampling under these conditions. The highest values for $\bar{d}$ were recorded in March at both sampling stations. It is normally during early spring that the overwintering eggs of many aquitic insects hatch, and these individuals will elevate diversity values. Diversity, then, at these Piceance Creek locations, appear to be reflecting the natural edaphic phenomena of a relatively healthy ecosystem.

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TERRESTRIAL
VEGETATION STUDIES

II C-3 TERRESTRIAL VEGETATION STUDIES

Introduction

The terrestrial vegetation studies are designed to: detect changes in the structural and compositional characteristics of the major plant communities, measure productivity and utilization, and observe general vegetation conditions.

Scope of Study

Community structure and composition are sampled on a three-year rotational sampling cycle in each of the six extensive study plots established in the four major vegetation types.

Herbaceous productivity and utilization is sampled once each year in four exclosure locations and 65 range cages.

General vegetation condition is monitored yearly by aerial photographs beginning in 1979.

Methods

"Community structure and composition"

Two control and two development plots will be sampled utilizing the existing intensive study plots in the two major habitat types on the Tract i.e., chained pinyon-juniper (CPJ) rangeland, pinyon-juniper (PJ) woodland. These study plots will allow comparisons of possible developmental effects between control and developmental plots, plus baseline comparisons. One upland sagebrush and one bottomland sagebrush control site will also be monitored and compared to baseline data.

Sampling at these study sites will be carried out on a three-year rotational basis; each plot will be sampled every three years, two plots each year (CPJ in 1978, PJ in 1979 and sagebrush in 1980).

Parameters are monitored by repeated sampling of permanently located herb quadrats and line transects, and by repeated measurement of marked trees at permanently located study sites. Sampling employs the same methods used during baseline investigations. Shrub frequency, density, and cover are measured using 20 4x10 m belt transects (Lindsey, 1955), per plot. Herb frequency and cover will be measured using 25 1-m^2 (one centare) quadrats per site; cover by litter, soil, rock, lichens, mosses, and woody seedlings will also be measured in these quadrats. Sampling of trees in the woodland sites will include canopy cover by vertical projection (dizzy stick method).

Methods (Cont'd)

"Herbaceous Productivity and Utilization"

During the developmental monitoring period, two control and two development sites (pinyon-juniper and chained pinyon-juniper) are used to evaluate herbaceous production. The bottomland and upland sagebrush sites are control sites; no developmental sites exist due to the lack of development in these vegetation types. Therefore, herb productivity will not be sampled at these intensive study sites. At each site an area 50 meters on a side is fenced with three-strand barbed wire prior to the onset of growth in the spring. Clipping will be accomplished once during the growing season at time of estimated peak standing crop. At this date, the current live fraction in ten 1 m^2 plots will be clipped according to major vegetation fractions. Additionally, ocular estimates of standing crop will be made in the clipped plots as well as in 40 additional 1 m^2 quadrats. The clipped weights will be compared to estimated weights from the same plots and a correction factor will be derived from the additional 40 1 m^2 quadrats. A total of 40 1 m^2 quadrats will be clipped and estimated (10 clips/site x 4 sites) and 160 1 m^2 quadrats will be only estimated at the four intensive study sites (control and developmental sites in pinyon-juniper and chained pinyon-juniper). Productivity and utilization from the fenced or exclosure areas can be compared to the first three years of monitoring data that were obtained from these same areas. Cattle fences will be removed at the end of the growing season and will be re-established in a slightly different location (but still in the same vegetation types and general area) the following spring.

In order to evaluate the variation of production throughout the Tract and obtain data for the bottomland and upland sagebrush communities, a second approach is used. A total of 40 range cages are randomly located in the major vegetation types on the Tract: pinyon-juniper woodland and chained rangeland, upland sagebrush and bottomland sagebrush. At the time of estimated peak standing crop, a 1 m^2 area is clipped from the area excluded by each range cage to determine production. These clips are divided into the same major vegetation fractions used during baseline. An additional replicate of 40 samples to determine utilization are taken from unexclosed areas lying close to the sampled range cages.

Another 20 range cages are placed in the south-facing pinyon-juniper woodlands located north of Piceance Creek (an area most likely to be exposed to air emissions). Ten cages are placed in areas of anticipated developmental influences and ten in control areas. Each cage is large enough to accomodate a 1 m^2 quadrat. A replicate of 20 1 m^2 quadrats in adjacent open areas is used to determine utilization. These areas have not been sampled for herbaceous production and utilization previously and these studies are conducted during the 1978 growing season. Following this baseline, the study will become system dependent and may only be used after retorting and SO_2 emissions begin.

Two different vegetation types were fertilized on Tract, using two fertilizer treatments per vegetation type. (See fertilization map, Figure 8.1-2 of the Development Monitoring Plan.) To test the degree of influence of the fertilizer treatments, a range cage was placed in each treatment site and one cage used as a control. (The control for the other site is the cattle exclosure at the adjacent intensive study site.)

These five cages are clipped to determine production, and a replicate of five 1 m^2 quadrats in adjacent open areas is clipped to determine utilization. All clips are divided into the major vegetational fractions mentioned previously.

Results and Discussion

Results and analysis for community structure and composition, and herbaceous productivity and utilization have not been completed. This data and analysis will be presented in the next report. Preliminary results from the 1978 monitoring program are:

1. Community structure and composition --

During 1978, cover and frequency estimates were obtained from the two chained pinyon-juniper rangeland permanent sampling plots. The most striking difference between the baseline years and the 1978 growing season was the large number of plants which flowered during 1978. During the baseline years, very few flowering individuals were observed. In 1978, nearly all of the grasses produced flowering culms. As a result of the increased number of inflorescences, the total cover values were somewhat higher than during the baseline years. No major differences in species composition were noted.

2. Herbaceous productivity and utilization --

The primary production in all of the community types which were sampled was greater in 1978 than it was during the baseline years. The wet winter and early spring provided enough moisture to allow for an abundance of herbaceous growth. The production was strikingly different from that which had been ovserved in earlier years and provides an idea of what the area is capable of producing given an adequate supply of moisture.

Preliminary data suggest that the addition of fertilizer to the chained rangelands was successful in increasing the total production in the application areas. The data are too limited, however, to evaluate the statistical significance of the difference.

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SOIL SURVEY &
PRODUCTIVITY
ASSESSMENT

C-4 SOIL SURVEY AND PRODUCTIVITY ASSESSMENT

No additional studies were made during this time period.

DENDROCHRONOLOGY &
DENDROCLIMATOLOGY
STUDIES

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DENDROCHRONOLOGY &
DENDROCLIMATOLOGY
STUDIES

II C-5 DENDROCHRONOLOGY & DENDROCLIMATOLOGY STUDIES

No additional studies were made during this time period.

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OTHER STUDIES

III OTHER STUDIES

Data were collected in only two of the programs in the Other Studies categories during the period September 1977 through March 1978. These programs were the Microenvironmental Studies and Industrial Health and Safety Studies. The other programs in the Other Studies categories were inactive during this time period.

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FISH AND WILDLIFE
MANAGEMENT PLAN

III A FISH & WILDLIFE MANAGEMENT PLAN

No additional studies were made during this time period.

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REVEGETATION STUDIES

III B REVEGETATION PROGRAM

No data were collected during this period. Sampling will continue in 1979 to determine success of the revegetation efforts.

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MICRO-ENVIRONMENTAL
STUDIES

III-C MICRO-CLIMATE PROGRAM

Introduction

Micro-climatic parameters for January, 1978 - December, 1978 include the following:

1. Maximum and minimum temperature at surface and at one meter.
2. Precipitation
3. Snow depth and moisture content

Scope

In addition to the extensive meteorology study in Air Quality Section, micro-climatic stations are monitored. Studies on micro-climatic parameters on the C-b Tract provide data that are useful in assessing changes in vegetation production and structure, animal populations, or animal activity patterns, and may also be correlated with changes in functional components of the C-b ecosystem that may occur as a result of shale oil development. Five micro-climatic stations are located in developmental site and five in control sites. The following sites are monitored:

Mc Station Locations

No. 1 Chained Pinyon-juniper Rangeland, Veg. Plot 1
No. 2 Chained Pinyon-juniper Rangeland, Veg. Plot 2
No. 3 Plateau Sagebrush, Veg. Plot 3
No. 4 Valley Bottom Sagebrush, Veg. Plot 4
No. 5 Pinyon-juniper Woodland, Veg. Plot 5
No. 6 Pinyon-juniper Woodland, Veg. Plot 6
No. 7 Chained Pinyon-juniper Rangeland
(Animal Trapping Transect)
No. 8 Bunchgrass Community, South-facing Slope
No. 9 Valley Bottom Sagebrush, Mouth of Sorghum Gulch
No.13 Mixed Mountain Shrubland, North-facing Slope

All temperature readings consist only of maximum and minimum readings for two-week periods. Precipitation will be measured only during the growing season, March through October. Therefore, precipitation data from meteorology stations 020 and 023 are utilized for winter-month readings (November - February) for valley and pinyon-juniper microclimate stations. Snow measurements are obtained approximately from November - February.

Results and Discussion

No detailed analysis of the data in Table III C-2 from the micro-climatic program is currently available.

Table/Figure No.	Description	Page No.
Table III C-1	Precipitation Totals for the Four Major Vegetation types, 1975-1976	III C-3
Figure III C-1	Precipitation Summary for the Four Major Vegetation types, 1977-1978	III C-4
Figure III C-2	Summary of Air and Surface Temperature 1978	III C-5
Table III C-2	Summary of Micro-climate Data, April - September 1978	III C-6

Table III C-1

PRECIPITATION (mm) TOTALS (DEC-SEPT)
FOR THE FOUR MAJOR VEGETATION TYPES, 1975 - 1976
TRACT C-b

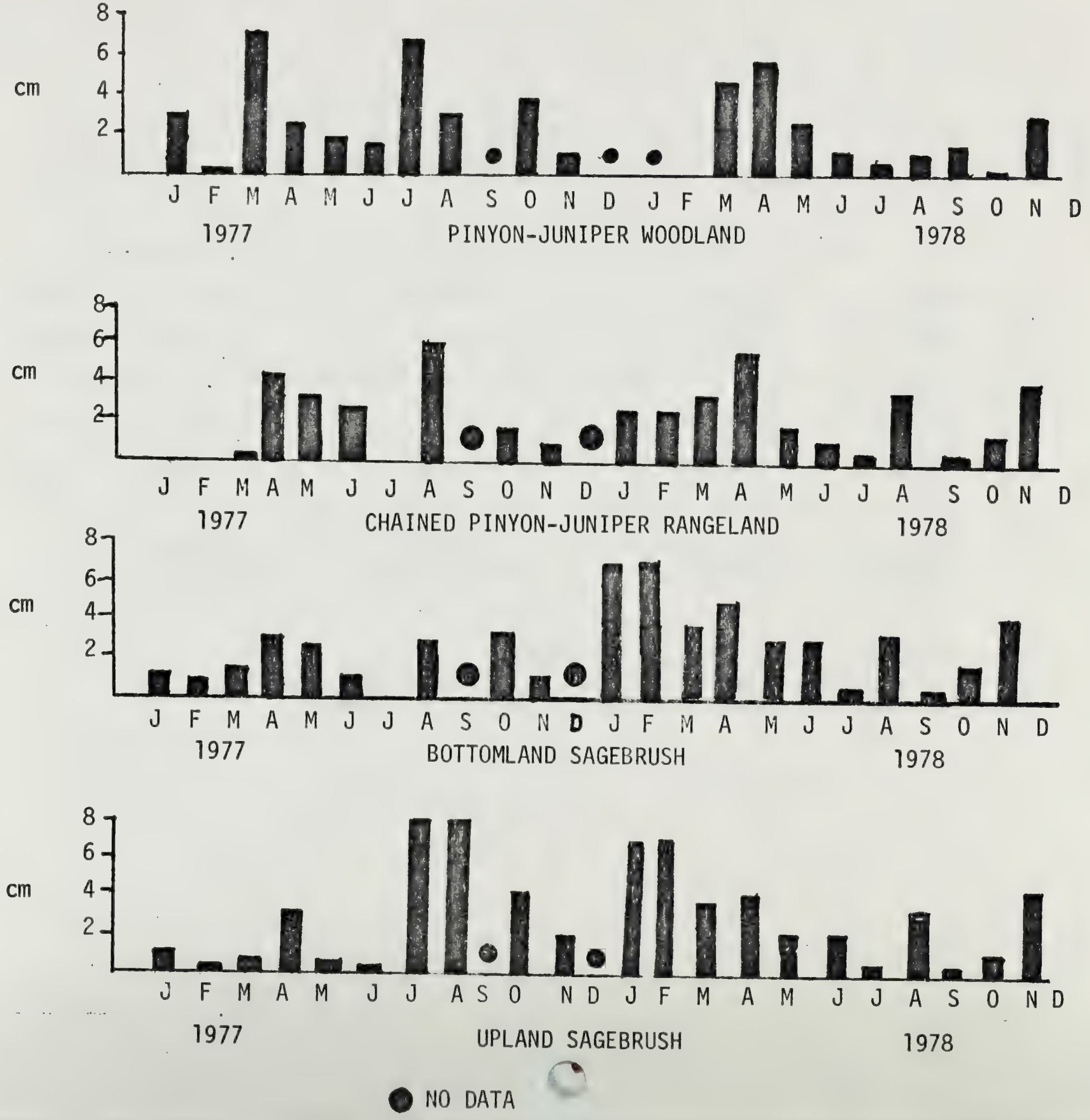
	Pinyon-Juniper Woodland	Chained Pinyon-Juniper Rangeland	Bottomland Sagebrush	Upland Sagebrush
1975	246	235	215	235
1976	162	170	181	216
1977	224*	144**	152**	356*
1978	217**	349***	351***	364***

* Data for 10 mos.
** Data for 9 mos.
*** Data for 11 mos.

Figure III C-1

PRECIPITATION SUMMARY FOR THE FOUR MAJOR VEGETATION TYPES 1977-1978 TRACT C-b

TOTAL ACCUMULATION PER MONTH



PINYON-JUNIPER WOODLAND

CHAINED PINYON-JUNIPER RANGELAND

BOTTOMLAND SAGEBRUSH

UPLAND SAGEBRUSH

● NO DATA

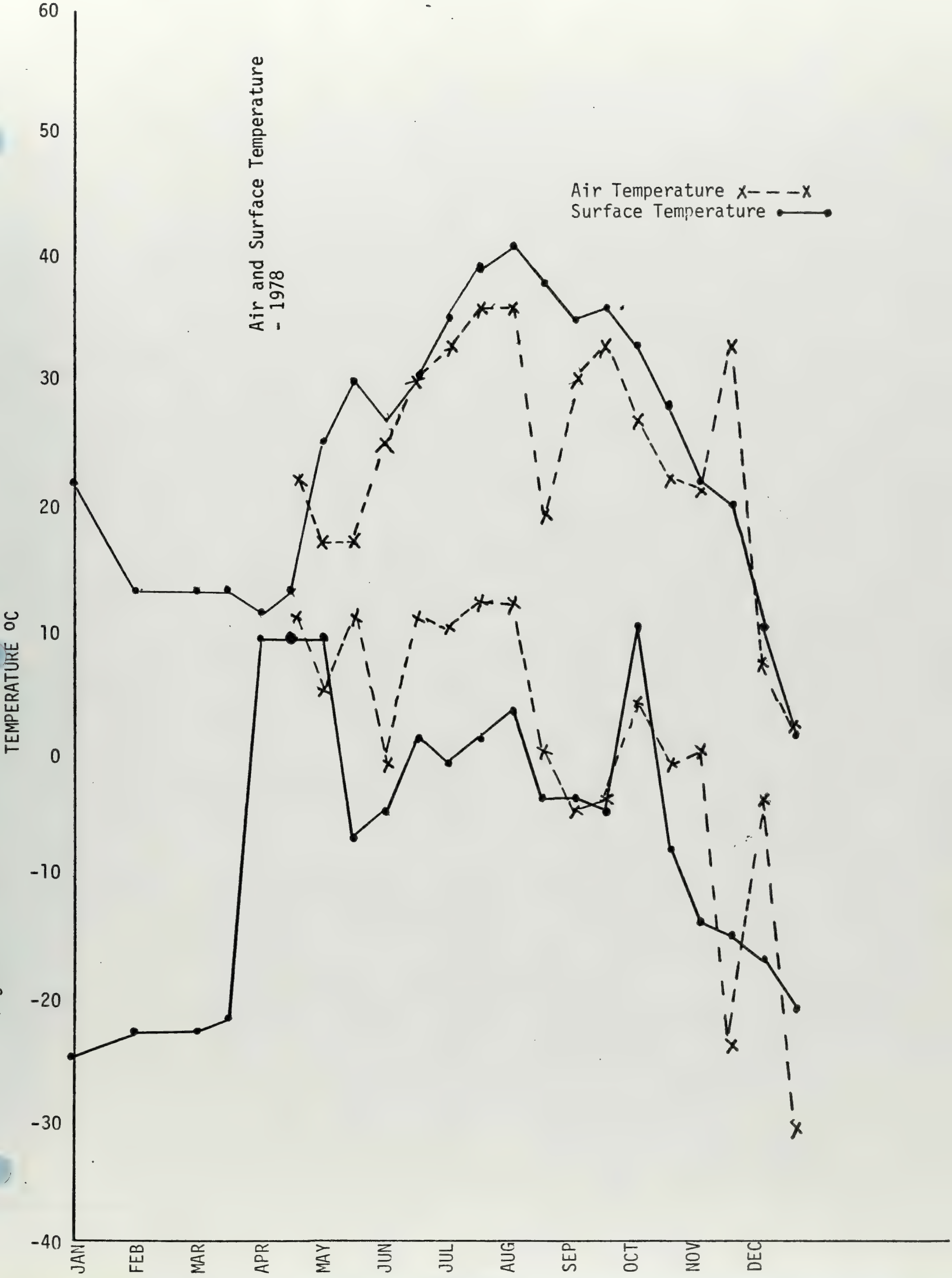


Figure III C-2

Air and Surface Temperature - 1978

Table III C-2

Microclimate Data

April'78 - Sept'78

Site Number	PARAMETER	MONTH					
		April	May	June	July	August	Septem
1	Air Temperature Maximum (°C)	28	9	35	35	29	28
	Air Temperature Minimum (°C)	9	2	1	2	-3	-4
	Surface Temperature Maximum (°C)	8	33	40	44	42	42
	Surface Temperature Minimum (°C)	7	-8	-11	0	-3	-5
	Total Precipitation (Inches)	3.04	.93	.99	.48	.34	.57
2	Air Temperature Maximum (°C)	29	21	32	37	30	40
	Air Temperature Minimum (°C)	10	10	-6	7	-3	-5
	Surface Temperature Maximum (°C)	3	32	36	49	45	42
	Surface Temperature Minimum (°C)	-1	-9	1	-2	-4	-6
	Total Precipitation (Inches)	1.87	.86	1.05	1.01	.37	.60
3	Air Temperature Maximum (°C)	19	19	28	34	29	37
	Air Temperature Minimum (°C)	9	10	-12	7	5	-4
	Surface Temperature Maximum (°C)	26	20	26	34	35	40
	Surface Temperature Minimum (°C)	1	-6	-5	-2	-1	-5
	Total Precipitation (Inches)	1.85	1.03	1.09	.72	.50	.47
4	Air Temperature Maximum (°C)	25	21	36	40	36	39
	Air Temperature Minimum (°C)	9	9	-1	-3	-5	-7
	Surface Temperature Maximum (°C)	25	35	36	46	44	41
	Surface Temperature Minimum (°C)	5	-8	1	-1	-4	-7
	Total Precipitation (Inches)	2.09	.96	1.12	.81	.44	.53
5	Air Temperature Maximum (°C)	24	29	34	36	32	33
	Air Temperature Minimum (°C)	-6	-6	-9	1	-4	-5
	Surface Temperature Maximum (°C)	12	18	38	26	35	37
	Surface Temperature Minimum (°C)	9	-15	-1	-6	1	-2
	Total Precipitation (Inches)	2.83	.63	1.10	.13	.14	49
6	Air Temperature Maximum (°C)	21	30	35	38	31	33
	Air Temperature Minimum (°C)	8	-1	-4	8	0	-2
	Surface Temperature Maximum (°C)	8	34	38	49	41	39
	Surface Temperature Minimum (°C)	2	-4	-3	4	-1	-3
	Total Precipitation (Inches)	2.31	.98	.89	.26	.47	.60
7	Air Temperature Maximum (°C)	22	17	33	36	30	33
	Air Temperature Minimum (°C)	9	5	-1	12	-5	-4
	Surface Temperature Maximum (°C)	13	30	35	41	38	36
	Surface Temperature Minimum (°C)	9	-7	-5	1	-4	-5
	Total Precipitation (Inches)	1.85	.78	1.18	.67	.41	.64
8	Air Temperature Maximum (°C)	31	24	29	36	33	43
	Air Temperature Minimum (°C)	5	-6	-2	0	-6	-6
	Surface Temperature Maximum (°C)	11	37	41	51	47	46
	Surface Temperature Minimum (°C)	10	0	-1	8	-1	-1
	Total Precipitation (Inches)	1.46	.83	1.52	.15	.39	.48
9	Air Temperature Maximum (°C)	29	22	27	40	41	35
	Air Temperature Minimum (°C)	8	-6	0	-5	-3	-6
	Surface Temperature Maximum (°C)	8	33	38	45	45	42
	Surface Temperature Minimum (°C)	3	-7	1	-2	-4	-7
	Total Precipitation (Inches)	2.11	.71	1.16	.16	.44	.52
13	Air Temperature Maximum (°C)	29	27	32	35	32	32
	Air Temperature Minimum (°C)	0	-4	-5	-10	-2	-7
	Surface Temperature Maximum (°C)	11	35	38	41	40	39
	Surface Temperature Minimum (°C)	3	25	-3	-8	-2	-7
	Total Precipitation (Inches)	2.40	1.02	1.20	.56	.58	.64

AERIAL PHOTOGRAPHIC
STUDIES

III D TRACT PHOTOGRAPHY

This section contains an explanation of work accomplished during the period of this report for:

1. Surface Program
2. Aerial Program

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SURFACE
PHOTOGRAPHY

III D-1 SURFACE PROGRAM

A 360^{0} panorama was photographed during the summer of 1978.

A complete set of the 35 mm slides are numbered as to station, aspect and date. The set is stored in plastic envelopes and bound in a three ring binder and filed in a dust and light controlled container as part of the permanent record of the C-b Shale Oil Venture.

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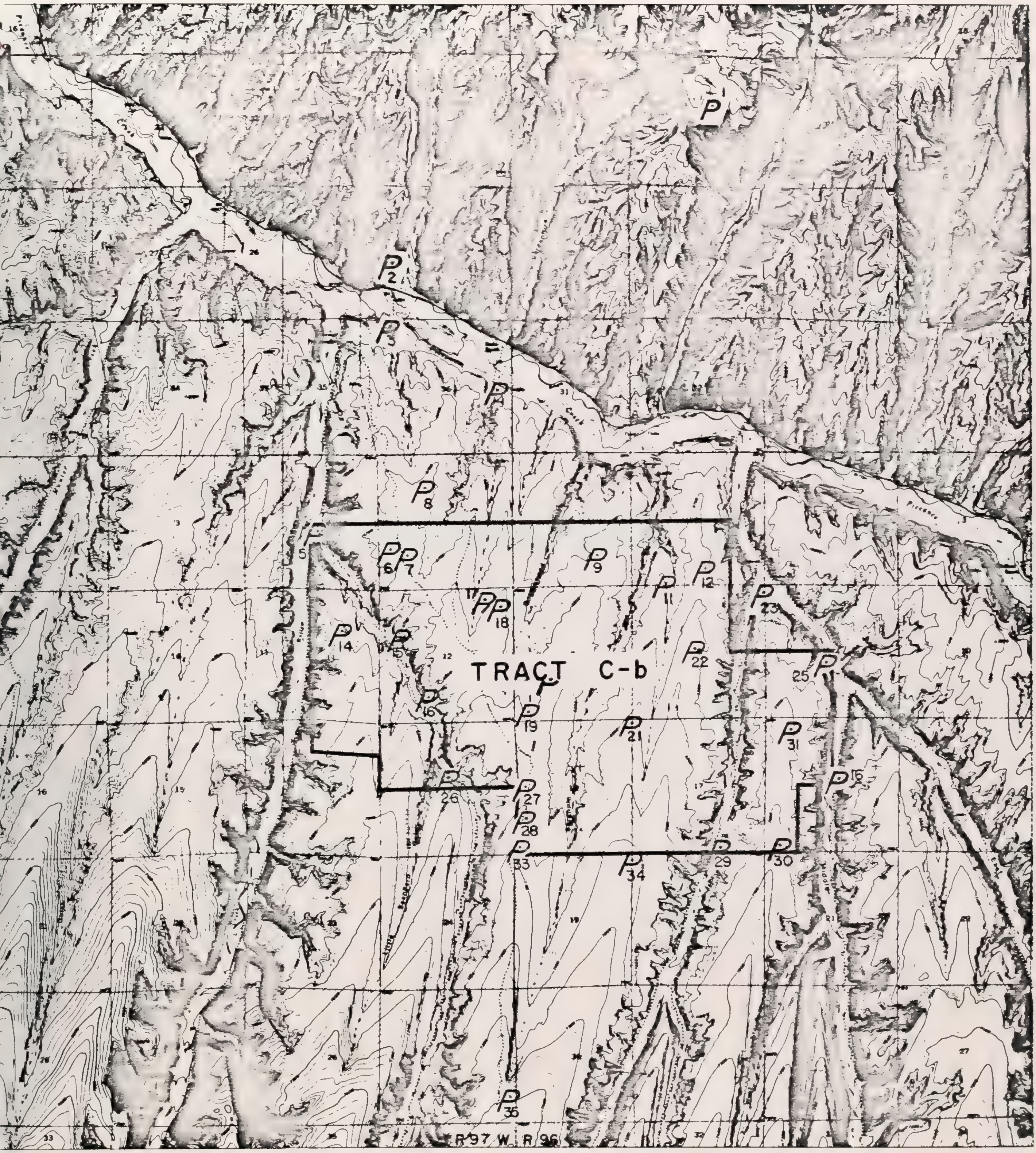

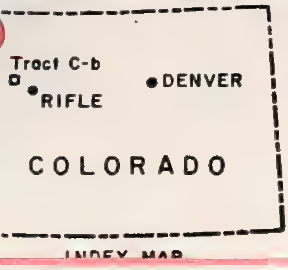

SURFACE PHOTOGRAPHY NETWORK

^{6}P = Photo Map Station

Figure III D-1

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AERIAL
PHOTOGRAPHY

III D-2 AERIAL PROGRAM

No additional color aerial photography of the C-b Tract was accomplished during this report period.

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III E ARCHAEOLOGICAL STUDIES

No additional studies were made during this time period.

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SCENIC VALUES STUDY

III F SCENIC VALUES STUDY

No additional studies were made during this time period.

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INDUSTRIAL
HEALTH & SAFETY

III G INDUSTRIAL HEALTH AND SAFETY

Periodic reports on Health and Safety Activities have been requested by the Area Oil Shale Supervisor. Such reports are those prepared by the C-b Venture and all contractors for distribution to outside Federal and State agencies, i.e., Mine Safety and Health Administration (MSHA) and the Colorado Division of Mines and inspection reports made by these agencies and received by the Venture and all contractors at the C-b site.

1) Quarterly Employment Report (Table III G-1; 7 pages). On the bottom of this report the Injury Rate (IR) is to be recorded.

2) Injury and Illness Report (Table III G-2; 1 page).

3) Colorado Division of Mines Inspection Reports. On these reports (#3 and #4), responsive comments are to be made on the disposition of the citations (abated or reason not abated). (Table III G-3; 6 pages).

4) MSHA Inspection Reports (Table III G-4; 3 pages).

It is noted there that the reproduction quality of these reports is the best obtainable. Originals are on file at the C-b Tract.

Quarterly Mine Employment and Coal Production Report

TABLE III G-1

U.S. Department of Labor
Mine Safety and Health Administration

Page 1 of 7

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O.M.B. No. 44-R1761; Approval Expires December 1982

This report is required by law (30 U.S.C. § 813; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. § 818 respecting an operator of a coal or other mine, and assessment of a civil penalty against an operator of a coal or other mine under 30 U.S.C. § 820 (a). An individual who, being subject to the Federal Mine Safety and Health Act of 1977 (30 U.S.C. § 801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 5 years, or both, under 30 U.S.C. § 820 (f). Any individual who knowingly and willfully makes any false, fictitious, or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. § 1001.

1. Fill out this form as completely as possible and return the first sheet of this report to →
2. If it is necessary to make any address changes, indicate corrected information on this form.
3. This preaddressed form is only for the operation with I.D. number as shown. DO NOT use this form for any other operation. →
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MSHA, Health and Safety Analysis Center
P.O. Box 25367, Federal Center
Denver, Colorado 80225
0503140 M
1 0510 C03

DATE REPORT COMPLETED
10 | 13 | 78
MO. DAY YR.
FOR THIRD QUARTER
(JUL THRU SEP)

MAIL BEFORE
OCTOBER 15 1973

1. Persons Working, Employee-Hours, and Coal Production

(1) Operation Sub Unit Code(s) previously reported:		Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
Underground Mine	Underground	01			
	Surface Shops, Yards, Etc.	02			▨
Surface Mine (Including shops and yards)	Strip, Open Pit, or Quarry	03			
	Auger (Coal Mine Only)	04			
	Culm Bank or Refuse Pile (coal mine only)	05			
	Dredge	06			
	Other (Metal/Nonmetal Surface Mining)	12			▨
	Independent Shops or Yards	17			▨
Mill Operations, Preparation Plant, or Breaker (Include associated shops and yards)		30			▨
Office (professional and clerical workers at the mine or plant)		99	30	13,868	▨

2. Other Reportable Data

How many MSHA reportable injuries or illnesses did you have this quarter? 0

Person to be contacted regarding this report
Name: Cody Spears
Title: Sr. Safety Inspector
Phone: 242-8463

▶ If this report is being submitted by a contractor or lessee check here ☐

IF ANY INFORMATION BELOW IS INCORRECT PLEASE ENTER CORRECT INFORMATION HERE:

COUNTY:

OPERATION NAME:

OPERATING COMPANY NAME AND ADDRESS

Change Rio Blanco, CO. 81651
to
Rifle, Colorado 81650

MESA I.D. NO. 0503140
COUNTY RIO BLANCO

OPERATION NAME
C B TRACT SHALE OIL VENTU

OPERATING COMPANY NAME AND ADDRESS
OCCIDENTAL OIL SHALE INC
PICEANCE CREEK ROAD
RIO BLANCO CO 816[illegible]1

FORM APPRO
O.M.B. NO. 4

III G-3

Do not write in this space

TABLE III G-1 Mining Enforcement and Safety Administrati

This report is required by law (30 U.S.C. §§732, 821; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. §733 respecting an operator of a metal/nonmetal mine, institution of a civil action for relief under 30 U.S.C.§818 respecting an operator of a coal mine, and assessment of a civil penalty against an operator of a coal mine under 30 U.S.C. §819(a). An individual who, being subject to the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. §801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 6 months, or both, under 30 U.S.C. §819(d). Any individual who knowingly and willfully makes any false, fictitious or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. §1001.

1. Fill out this form as completely as possible and return the first sheet of this report to
2. If it is necessary to make any address changes, indicate corrected information on this form. →
3. This preaddressed form is only for the operation whose I.D. number and address are → DO NOT use this form for any other operation.
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MESA
HEALTH AND SAFETY ANALYSIS CENTER
P.O. BOX 25367, FEDERAL CENTER
DENVER, COLORADO 80225

I.D. NO. 503140 M
ADD. 1 0510 503

OPERATOR'S COPY – RETAIN

DATE REPORT COMPLETED
7 | 10 | 78
MO. DAY YR.

FOR SECOND QUARTE
APR THRU JUN

MAIL BEFORE
JULY 15 1978

IF THIS REPORT IS BEING SUB MITTED BY A CONTRACTOR OR LESSEE CHECK HERE ☐

1. EMPLOYMENT MANHOURS AND COAL PRODUCTION

(1) Operations Sub Unit Code(s) previously reported:	Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
UNDERGROUND MINE Underground	01			
Surface shops, yards, etc.	02			▨
SURFACE MINE (including shops and yards) Strip, Open Pit or Quarry	03			
Auger (coal mine only)	04			
Culm Bank or Refuse Pile (coal mine only)	05			
Dredge	06			
Other (metal/nonmetal surface mining)	12			▨
Independent shops or yards	17			▨
Mill Operations, Preparation Plant, or Breaker (include associated shops and yards)	30			▨
Office (professional and clerical workers at the mine or plant)	99	13	9925.50	▨

IF ANY INFORMATION BELOW IS INCORREC PLEASE ENTER CORRECT INFORMATIO HERE:

COUNTY ____

OPERATION NAME ____

OPERATING COMPANY NAME AND ADDRES

MESA I.D. NO. COUNTY
0503140 RIO BLANCO

OPERATION NAME
C B TRACT SHALE OIL VENTU

OPERATING COMPANY NAME AND ADDRESS
OCCIDENTAL OIL SHALE INC
PICEANCE CREEK ROAD
RIO BLANCO CO 81651

2. OTHER REPORTABLE DATA

Did you have any reportable injuries or illnesses during this report period (1) ☐ Yes (2) ☒ No

If Yes, total number of injuries and illnesses ____

Person to be contacted regarding this report: Cody Spears (name) Senior Safety Inspector (title) 242-8463 (phone)

GEOLOGY

III G-4

Quarterly Mine Employment and Coal Production Report

TABLE III G-1

U.S. Department of Labor
Mine Safety and Health Administration

Page 3 of 7

Do Not Write In This Space

O.M.B. No. 44-R1761; Approval Expires December 1982

This report is required by law (30 U.S.C. § 813; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. § 818 respecting an operator of a coal or other mine, and assessment of a civil penalty against an operator of a coal or other mine under 30 U.S.C. § 820 (a). An individual who, being subject to the Federal Mine Safety and Health Act of 1977 (30 U.S.C. § 801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 5 years, or both, under 30 U.S.C. § 820 (f). Any individual who knowingly and willfully makes any false, fictitious, or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. § 1001.

1. Fill out this form as completely as possible and return the first sheet of this report to →
2. If it is necessary to make any address changes, indicate corrected information on this form.
3. This preaddressed form is only for the operation with I.D. number as shown. DO NOT use this form for any other operation. →
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MSHA, Health and Safety Analysis Center
P.O. Box 25367, Federal Center
Denver, Colorado 80225

DATE REPORT COMPLETED

10 | | 7[illegible]
MO. DAY YR.

FOR JULY QUARTER
(JUL 1[illegible] [illegible])

MAIL BEFORE
OCTOBER [illegible]

1. Persons Working, Employee-Hours, and Coal Production

(1) Operation Sub Unit Code(s) previously reported:		Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
Underground Mine	Underground	01	23	10,327	
	Surface Shops, Yards, Etc.	02	[illegible]	[illegible]	▨
Surface Mine (including shops and yards)	Strip, Open Pit, or Quarry	03			
	Auger (Coal Mine Only)	04			
	Culm Bank or Refuse Pile (coal mine only)	05			
	Dredge	06			
	Other (Metal/Nonmetal Surface Mining)	12			▨
	Independent Shops or Yards	17			▨
Mill Operations, Preparation Plant, or Breaker (include associated shops and yards)		30			▨
Office (professional and clerical workers at the mine or plant)		99	22	12,144 [illegible]	▨

2. Other Reportable Data

How many MSHA reportable injuries or illnesses did you have this quarter? None

Person to be contacted regarding this report — Name: Dale Frisch — Title: Safety Engineer — Phone: 303-2[illegible]2-34[illegible]3

▶ If this report is being submitted by a contractor or lessee check here ☐

IF ANY INFORMATION BELOW IS INCORRECT PLEASE ENTER CORRECT INFORMATION HERE:

COUNTY ______

OPERATION NAME ______

OPERATING COMPANY NAME AND ADDRESS

______

______

______

______

MESA I.D. NO. [illegible]3149 — COUNTY RIO BLANCO

OPERATION NAME
C-3 TRACT

OPERATING COMPANY NAME AND ADDRESS
GILBERT CORP OF DELAWARE
DRAWER 1590
RIFLE [illegible] 81650

FORM APPROVED.
O.M.B. NO. 42-R176.

FORM 7000-2
JANUARY 1976

TABLE III G-1

UNITED STATES
DEPARTMENT OF THE INTERIOR
Mining Enforcement and Safety Administration

QUARTERLY MINE EMPLOYMENT AND COAL PRODUCTION REPORT

Page 4 of 7

Do not write in this space

This report is required by law (30 U.S.C. §§ 732, 821; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. § 733 respecting an operator of a metal/nonmetal mine, institution of a civil action for relief under 30 U.S.C. § 818 respecting an operator of a coal mine, and assessment of a civil penalty against an operator of a coal mine under 30 U.S.C. § 819(a). An individual who, being subject to the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. § 801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 6 months, or both, under 30 U.S.C. § 819(d). Any individual who knowingly and willfully makes any false, fictitious or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. § 1001.

1. Fill out this form as completely as possible and return the first sheet of this report to → MESA HEALTH AND SAFETY ANALYSIS CENTER, P.O. BOX 25367, FEDERAL CENTER, DENVER, COLORADO 80225
2. If it is necessary to make any address changes, indicate corrected information on this form.
3. This preaddressed form is only for the operation whose I.D. number and address are → I.D. NO. / ADD. DO NOT use this form for any other operation.
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MESA
HEALTH AND SAFETY ANALYSIS CENTER
P.O. BOX 25367, FEDERAL CENTER
DENVER, COLORADO 80225

I.D. NO.
ADD.

OPERATOR'S COPY – RETAIN

1. EMPLOYMENT MANHOURS AND COAL PRODUCTION

(1) Operations Sub Unit Code(s) previously reported:	Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
UNDERGROUND MINE Underground	01			
Surface shops, yards, etc.	02			▨
SURFACE MINE (including shops and yards) Strip, Open Pit or Quarry	03			
Auger (coal mine only)	04			
Culm Bank or Refuse Pile (coal mine only)	05			
Dredge	06			
Other (metal/nonmetal surface mining)	12			▨
Independent shops or yards	17			▨
Mill Operations, Preparation Plant, or Breaker (include associated shops and yards)	30			▨
Office (professional and clerical workers at the mine or plant)	99			▨

2. OTHER REPORTABLE DATA

Did you have any reportable injuries or illnesses during this report period (1) ☐ Yes (2) ☐ No

If Yes, total number of injuries and illnesses ______

Person to be contacted regarding this report: [illegible] Frisch (name) [illegible] (title) (phone)

DATE REPORT COMPLETE
MO. DAY YR.

FOR QUART
(

MAIL BEFORE

IF THIS REPORT IS BEING SU
MITTED BY A CONTRACTO
OR LESSEE CHECK HERE

IF ANY INFORMATION BELOW IS INCORRE
PLEASE ENTER CORRECT INFORMATI
HERE:

COUNTY ______

OPERATION NAME ______

OPERATING COMPANY NAME AND ADDRE

MESA I.D. NO. COUN

OPERATION NAME

OPERATING COMPANY NAME AND ADDRES
[illegible] CORP [illegible]
[illegible] 1640
RIFLE CO [illegible]

MINE SAFETY AND
HEALTH ADMINISTRATION TABLE III G-1

Page 5 of 7

MSHA
Mine Safety and Health Administration

```
ALTH & SAFETY ANALYSIS CEN
. O. BOX 25367
ENVER, COLORADO 80225

  ID:    0503149          MINE: [illegible] TRACT                                  1

BELOW IS A LISTING OF THE PRODUCTION, (COAL ONLY), EMPLOYMENT, ACCIDENT, AND INJURY DATA WHI[illegible]
HEALTH AND SAFETY ANALYSIS CENTER HAS IN ITS 1978 (JAN - JUNE) AUTOMATED FILE  FOR MINE-ID 0[illegible]

IF YOU HAVE ANY ADDITIONAL INJURIES THEY SHALL BE SUBMITTED ON FORM 7000-1.  FOR ALL INJURED
EMPLOYEES (IDENTIFIED BY ASTERISKS (*) IN THE RETURN TO WORK COLUMN) [illegible] RETURNED TO WORK
COMPLETE THE RETURN TO WORK DATA ON YOUR INJURY FORM (7000-1) AND [illegible] PINK COPY AND RETURN
THE PINK COPY TO MSHA - HSAC.  EMPLOYMENT ADDITIONS, [illegible], [illegible] SHALL BE MADE
THIS LISTING.  FOR ANY QUESTIONS CALL - 303-234-2[illegible]4.

RETURN ALL ACTIONS TO HEALTH AND SAFETY ANALYSIS CENTER [illegible] P.O. BOX 25367,
DENVER, COLORADO  80225.

QTR  S-U    EMP    EMP-HRS.  S-U    EMP    EMP-HRS.  [illegible]  [illegible]  [illegible]  S-U  [illegible]  [illegible]
 01  UNG     11      3460    SUR     30       527    [illegible]
 02  UNG     56     16117    SUR     24     12353                                  XXXXXX     11,716

NO ACCIDENT OR INJURY INFORMATION ON FILE.

[illegible] EMP-HRS. COLUMN (* *) INDICATES THAT [illegible]
EMPLOYMENT FOR THE QUARTER [illegible] SUB-UNIT LISTED.
```

lo,630 manhours ommitted for 2nd quarter for the Office
but the employees remains the same

FORM APPROV
O.M.B. NO 42-

III G-7

Do not write in this space

TABLE III G-1

Mining Enforcement and Safety Administr n

AND COAL PROD ION REPORT
Page 6 of 7

This report is required by law (30 U.S.C. §§732, 821; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. §733 respecting an operator of a metal/nonmetal mine, institution of a civil action for relief under 30 U.S.C.§ 818 respecting an operator of a coal mine, and assessment of a civil penalty against an operator of a coal mine under 30 U.S.C. §819(a). An individual who, being subject to the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. §801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 6 months, or both, under 30 U.S.C. §819(d). Any individual who knowingly and willfully makes any false, fictitious or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. §1001.

1. Fill out this form as completely as possible and return the first sheet of this report to
2. If it is necessary to make any address changes, indicate corrected information on this form.
3. This preaddressed form is only for the operation whose I.D. number and address are DO NOT use this form for any other operation.
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MESA
HEALTH AND SAFETY ANALYSIS CENTER
P.O. BOX 25367, FEDERAL CENTER
DENVER, COLORADO 80225

I.D. NO 0503148 M
ADD.1 0510 C03

RETURN TO MESA

1. EMPLOYMENT, MANHOURS AND COAL PRODUCTION

(1) Operations Sub Unit Code(s) previously reported:	Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
UNDERGROUND MINE Underground	01			
Surface shops, yards, etc.	02			▨
SURFACE MINE (including shops and yards) Strip, Open Pit or Quarry	03			
Auger (coal mine only)	04			
Culm Bank or Refuse Pile (coal mine only)	05			
Dredge	06			
Other (metal/nonmetal surface mining)	12			▨
Independent shops or yards	17	154	35,909	▨
Mill Operations, Preparation Plant, or Breaker (include associated shops and yards)	30			▨
Office (professional and clerical workers at the mine or plant)	99	22	11,616	▨

2. OTHER REPORTABLE DATA

Did you have any reportable injuries or illnesses during this report period (1) ☐ Yes (2) ☒ No

If Yes, total number of injuries and illnesses 00

Person to be contacted regarding this report: George Glass, Safety Supervisor (name) (title) 242-8463 (phone)

DATE REPORT COMPLETED 7 | 14 | 78
MO. DAY YR.

FOR SECOND QUARTER APR THRU JUN

MAIL BEFORE JULY 15 1978

IF THIS REPORT IS BEING SUB MITTED BY A CONTRACTOR OR LESSEE CHECK HERE ☐

IF ANY INFORMATION BELOW IS INCORREC PLEASE ENTER CORRECT INFORMATIO HERE:

COUNTY Rio Blanco

OPERATION NAME C-b Shale Oil Ventur

OPERATING COMPANY NAME AND ADDRES
Occidental Oil Shale Inc.
2372 "G" Road
P. O. Box 2687
Grand Junction, CO
81501

MESA I.D. NO. 0503148 COUNTY RIO BLANCO

OPERATION NAME C-B TRACT

OPERATING COMPANY NAME AND ADDRESS
RALPH M PARSONS CO
BOX 1111
RIFLE CO 81650

GEOLOGY

and Coal Production Report TABLE III G-1

Mine Safety and Health Administration Page 7 of 7

Do Not Write In This Space

O.M.B. No. 44-R1761; Approval Expires December 1982

This report is required by law (30 U.S.C. § 813; 30 C.F.R. Part 50). Failure to report can result in the institution of a civil action for relief under 30 U.S.C. § 818 respecting an operator of a coal or other mine, and assessment of a civil penalty against an operator of a coal or other mine under 30 U.S.C. § 820 (a). An individual who, being subject to the Federal Mine Safety and Health Act of 1977 (30 U.S.C. § 801 et seq.) knowingly makes a false statement in any report can be punished by a fine of not more than $10,000 or by imprisonment for not more than 5 years, or both, under 30 U.S.C. § 820 (f). Any individual who knowingly and willfully makes any false, fictitious, or fraudulent statements, conceals a material fact, or makes a false, fictitious, or fraudulent entry, with respect to any matter within the jurisdiction of any agency of the United States can be punished by a fine of not more than $10,000, or imprisoned for not more than 5 years, or both, under 18 U.S.C. § 1001.

III G-8

1. Fill out this form as completely as possible and return the first sheet of this report to →
2. If it is necessary to make any address changes, indicate corrected information on this form.
3. This preaddressed form is only for the operation with I.D. number as shown. DO NOT use this form for any other operation. →
4. SAND AND GRAVEL operators report employment data under code 03 or 06 as appropriate, except for data on office workers which should be reported under code 99.
5. Only operators of coal mines should enter production data in column (4) below.

MSHA, Health and Safety Analysis Center
P.O. Box 25367, Federal Center
Denver, Colorado 80225
0503148 M
1 0510 C03

DATE REPORT COMPLETED
10 02 78
MO. DAY YR.

FOR THIRD QUARTER
(JUL THRU SEP)

MAIL BEFORE
OCTOBER 15 1978

▶ If this report is being submitted by a contractor or lessee check here ☐

IF ANY INFORMATION BELOW IS INCORRECT PLEASE ENTER CORRECT INFORMATION HERE:

COUNTY Rio Blanco

OPERATION NAME C-b Shale Oil Venture

OPERATING COMPANY NAME AND ADDRESS

Occidental Oil Shale Inc.
2372 "G" Road
P. O. Box 2687
Grand Junction, CO
81501

MESA I.D. NO. 0503148
COUNTY RIO BLANCO

OPERATION NAME C-B TRACT

OPERATING COMPANY NAME AND ADDRESS
RALPH M PARSONS CO
2372 #G# RD P O BOX 2687
GRAND JCT CO 81501

1. Persons Working, Employee-Hours, and Coal Production

(1) Operation Sub Unit Code(s) previously reported: 01 02		Code	(2) Average number of persons working during quarter	(3) Total employee-hours worked during the quarter	(4) Production of clean coal during quarter, (short tons)
Underground Mine	Underground	01			
	Surface Shops, Yards, Etc.	02			▨
Surface Mine (Including shops and yards)	Strip, Open Pit, or Quarry	03			
	Auger (Coal Mine Only)	04			
	Culm Bank or Refuse Pile (coal mine only)	05			
	Dredge	06			
	Other (Metal/Nonmetal Surface Mining)	12			▨
	Independent Shops or Yards	17	162.03	93,796	▨
Mill Operations, Preparation Plant, or Breaker (Include associated shops and yards)		30			▨
Office (professional and clerical workers at the mine or plant)		99	27	14,528	▨

2. Other Reportable Data

How many MSHA reportable injuries or illnesses did you have this quarter? 2

Person to be contacted regarding this report	Name	Title	Phone
	George Glass	Safety Supervisor	242-8463

[illegible]

TABLE III G-2

PARSONS QUARTERLY INJURY REPORT - 1978

2nd quarter - Man hours	35,909
No reportable injuries	11,616
	47,525
3rd quarter - Man hours	93,796
	14,528
Two reportable injuries	108,324
	FREQUENCY RATE 3.69

Total number of inspections by MSHA. (2)
Sept. 6 - 1 citation issued
Sept. 11 - No citations issued

Colorado Bureau of Mines.

June 28	(3) citations issued
July 12	(2) citations issued
Aug. 9	(5) citations issued
Sept. 14	(0) citations issued
Nov. 22	(2) citations issued

TABLE III G-3

STATE OF COLORADO

Page 1 of 6

NORMAN R. BLAKE
Director

1313 Sherman St.
Denver, Colorado 80203
Telephone: 839-3401

DIVISION OF MINES
Department of Natural Resources

INSPECTION REPORT

Date 6/28/78 Number A-54 County RIO BLANCO

C.B. SHALE OIL VENTURE
Name of Operation

MINE - SHAFT DEVELOPMENT
Kind of Operation: Mine, Mill, Quarry, etc.

GILBERT CORP.
Name of Operator or Contractor

P.O. DRAWER 1646, RIFLE, Colo. 81650
Operator's Address

OCCIDENTAL OIL SHALE INC.
Name of Owner or Possessor

2372 B Rd. Box 2687, Grand Jct. Colo. 81501
Owner's Address

ROBERT RESIGH 242-8463
Name of Person in Charge

P.O. DRAWER 1646, RIFLE, Colo. 81650
Address and Telephone Number of Person in Charge

PRIVATE INSURER
Name of Compensation Insurance Company

SHAFT DEVELOPMENT
Products (List products or intended products)

Total men employed 75 Underground 63 Surface 12 Hours 24 Monthly Production —

☐ Producing ☑ Development ☐ Part-Time ☐ Exploration ☐ Idle Other

Number of accidents to date this year NONE Were they reported to the Division of Mines?

Location of Property TRACT C-b, SEC. 1,2,12, T-3S, R-96W

Date of last inspection 5/2/78 All references are to Bulletin 20

Having completed an inspection of the above named operation, I find that the items listed below must be given immediate attention in order to comply with Colorado Statutes and Division of Mines Rules and Regulations, CRS 1973, 34-40-113.

1. EQUIPMENT WITH BOOMS OR MASTS WHICH ARE NOT PROPERLY PROTECTED SHALL NOT BE OPERATED WHERE THE BOOMS OR MASTS CAN COME WITHIN TEN (10) FEET OF AN ENERGIZED OVERHEAD POWER LINE - SEC. 21, PARA. (57.12-43) 6/28/78
2. NO SMOKING SIGNS SHALL BE POSTED ON THE DIESEL STORAGE TANK, BY THE PORTABLE COMPRESSOR & AT THE SHOP SURFACE ACETYLENE & OXYGEN STORAGE AREA - SEC. 147, PARA. 7, (57.4-2) - ABATED
3. THE NEXT TO LAST LADDER IN THE AIR INTAKE SHAFT SHALL BE SECURELY FASTENED TO THE WALL - SEC. 97, PARA. 8, 6/28/78

Remarks:

Have former recommendations been complied with? YES

Persons accompanying Inspector:
DALE DYER, CODY SPEARS, GEORGE BLASS
ROBERT RESIGH

Title:
Safety Supv., OXY CONST. [illegible] SAFETY MGR.
GILBERT Co.-MGR.

Cooperation Received Good
David W. [illegible]
Metal Mining Inspector — District (3)
R1, Box 136B, Buena Vista, Colo. 81211
Address
Telephone Number 395-2715

I have received a copy of this report for the Operator:

Signed: Cody Spears Title: Safety Sup.

READ, KNOW AND PRACTICE YOUR SAFETY RULES

COM I (Rev. 10-77)

STATE OF COLORADO

NORMAN R. BLAKE
Director

1845 Sherman St.
Denver, Colorado 80203
Telephone: 892-3401

DIVISION OF MINES
Department of Natural Resources

INSPECTION REPORT

Date 7-12-78 Number H-67 County Rio Blanco

C.B Shale oil Venture
Name of Operation

Mine
Kind of Operation: Mine, Mill, Quarry, etc.

Gilbert Corp.
Name of Operator or Contractor

P.O. Drawer 1646 Rifle, Colo 81
Operator's Address

Occidental oil shale Inc.
Name of Owner or Possessor

2372 8 Rd box 2687 Grand Junction
Owner's Address

Robert Resigh 242-2453
Name of Person in Charge

P.O. Drawer 1646 Rifle Colo
Address and Telephone Number of Person in Charge

Privat Insurer
Name of Compensation Insurance Company

Shaft Development
Products (List products or intended products)

Total men employed 75 Underground 63 Surface 12 Hours 24 Monthly Production —

☐ Producing ☑ Development ☐ Part-Time ☐ Exploration ☐ Idle Other

Number of accidents to date this year Were they reported to the Division of Mines?
Location of Property Tract C-b Sec 14, 18 T-3S R96W

Date of last inspection 6-28-78 All references are to Bulletin 20

Having completed an inspection of the above named operation, I find that the items listed below must be given immediate attention in order to comply with Colorado Statutes and Division of Mines Rules and Regulations, CRS 1973, 34-40-113.

1. The Septic Tanks in Front of The Gilberts Trailers shall be covered. Sec. 58, Part 3 (57.3-5). 7-1[illegible]
2. All employees shall wear Safety glasses or Shields when working on The Property. Sec. 77, Part 3 (57.14-14) 7-12-78

Remarks:

Have former recommendations been complied with?

Persons accompanying Inspector:
Glen Skyes — Title: Eng.
George Glass — Title: Safety

Cooperation received Excellent
J. H. Hunter
Metal Mining Inspector — District (3)
box 392 Leadville
Address
Telephone Number 486 3741

I have received a copy of this report for the Operator:
Signed: Title: Safety Supervisor

READ, KNOW AND PRACTICE YOUR SAFETY RULES

CDM I (Rev. 1-76)

STATE OF COLORADO

NORMAN R. BLAKE
Director

1313 Sherman St.
Denver, Colorado 80203
Telephone: 839-3401

DIVISION OF MINES
Department of Natural Resources

INSPECTION REPORT

Date 8-9-78
Number H-85
County Rio Blanco

Name of Operation: C.B. Shale oil Venture
Kind of Operation: Mine, Mill, Quarry, etc.: Mine
Name of Operator or Contractor: Gilbert Corp.
Operator's Address: P.O. drawer 1646 Rifle, Colo.
Name of Owner or Possessor: Occidental Oil Shale Inc.
Owner's Address: 2372 8 Rd box 2697 Grand Junction, Colo
Name of Person in Charge: Robert Resign 242-8463
Address and Telephone Number of Person in Charge: P.O. drawer 1646 Rifle, Colo.
Name of Compensation insurance Company: Private Insurer
Products (List products or intended products): Shaft Development

Total men employed 75 Underground 63 Surface 12 Hours 24 Monthly Production

☐ Producing ☑ Development ☐ Part-Time ☐ Exploration ☐ Idle Other 10/11/78

Number of accidents to date this year
Were they reported to the Division of Mines?
Location of Property Tract C-b Sec. 1,2, 13 T-3S R 96W

Date of last inspection
All references are to Bulletin 20

Having completed an inspection of the above named operation, I find that the items listed below must be given immediate attention in order to comply with Colorado Statutes and Division of Mines Rules and Regulations, CRS 1973, 34-40-113.

1. No smoking signs shall be posted at the new fuel storage tanks. Sec. 147 Para 7 (57.4-2) 8-11-78
2. Cutting operations shall not be done in confined places unless ventilation is provided. Sec. 167 Para. 4. 8-9-78
3. The ring on the ladder guard in the V.I. Shaft shall be repaired. Sec. 98 Para 9. 57.11-3 8-9-78
4. Employees shall use Tag lines when guidin loads being moved by cranes or booms. Sec. 151 Para 11 (57.16-19)
5. The safety hook on the #50? Pett. bone boo Truck shall be repaired before it is used aga Sec. 86 Para. 24 57.19-75

Remarks:
Have former recommendations been complied with?

Persons accompanying Inspector: George Glass
Title: Safety (Parsons)
Cooperation received Excellent
Joe H. [illegible]
Metal Mining Inspector — District (3)
Box 392 Leadville
Address
Telephone Number 486-3741

I have received a copy of this report for the Operator:
Signed George Glass
Title: Safety Supervisor

READ, KNOW AND PRACTICE YOUR SAFETY RULES

CDM I (Rev. 10-77)

TABLE III G-3

STATE OF COLORADO

Page 4 of 6

NORMAN R. BLAKE
Director

1876

1313 Sherman St.
Denver, Colorado 80203
Telephone: 839-3401

DIVISION OF MINES

Department of Natural Resources

INSPECTION REPORT

Date 10/11/78 Number [illegible] County [illegible]

Name of Operation: [illegible] Venture

Kind of Operation: Mine, Mill, Quarry, etc.: Mine

Name of Operator or Contractor: [illegible]

Operator's Address: [illegible]

Name of Owner or Possessor: [illegible]

Owner's Address: [illegible]

Name of Person in Charge: [illegible]

Address and Telephone Number of Person in Charge: [illegible]

Name of Compensation Insurance Company:

Products (List products or intended products): [illegible]

Total men employed ____ Underground [illegible] Surface [illegible] Hours [illegible] Monthly Production [illegible]

☐ Producing ☐ Development ☐ Part-Time ☐ Exploration ☐ Idle Other ____

Number of accidents to date this year - Were they reported to the Division of Mines? -

Location of Property [illegible]

Date of last inspection [illegible] All references are to Bulletin [illegible]

Having completed an inspection of the above named operation, I find that the items listed below must be given immediate attention in order to comply with Colorado Statutes and Division of Mines Rules and Regulations, CRS 1973, 34-40-113.

1. The covers shall be [illegible] placed on the switch electrical [illegible] in the batch plant control room and in the new warehouse [illegible] Sec-50, part 35 (57.12-32) 10/11/78 (covers off)
2. The junction box cover shall be replaced on the box for the electrical motor on the [illegible]. Sec. 50, part 35 (57.12-32) 10/11/78 (cover missing)
3. The electrical plug in outlet box at the service shaft [illegible] shall be removed from service (insulation broken on outlet) - Sec. [illegible] part 31 (57.12-30) [illegible] [illegible]
4. Hair which extends below the normal collar line must be contained in a manner which will hold it above the collar line and [illegible] it from being entangled in machinery or equipment - Sec.-76, part 12 [illegible] (Oil field contractor employee, oil field electric contractor employee, [illegible] Const. Co. employee).

Remarks:

Have former recommendations been complied with? [illegible]

Persons accompanying Inspector: [illegible]
Title: Safety [illegible]

Cooperation received [illegible]

Metal Mining Inspector — District ([illegible])

Address [illegible]

I have received a copy of this report for the Operator:

Signed: [illegible] Title: [illegible] Telephone Number [illegible]

COM 1 (Rev. 10-77)

READ, KNOW AND PRACTICE YOUR SAFETY RULES

STATE OF COLORADO

NORMAN R. BLAKE
Director

1313 Sherman St.
Denver, Colorado 80203
Telephone: 839-3401

DIVISION OF MINES
Department of Natural Resources

INSPECTION REPORT

Report No. 2-89 Page 2

C.B. Shale oil Venture
Name of Operation

Mine
Kind of Operation: Mine, Mill, Quarry, etc.

5. Adequate fire extinguishers shall be provided at the new generating plant building - Sec. 14, Part 1, (57.4-22) 10/11/78

6. A no smoking sign shall be provided at the white+sun's oil storage rack area - Sec-14, Part 7, (57.4-2) 10/11/78

Signed: ______ Metal Mining Inspector — District ( ) Telephone Number ______

READ, KNOW AND PRACTICE YOUR SAFETY RULES

CDM 1-d

TABLE III G-3

STATE OF COLORADO

NORMAN R. BLAKE
Director

1313 Sherman St.
Denver, Colorado 80203
Telephone: 839-3401

DIVISION OF MINES
Department of Natural Resources

INSPECTION REPORT

Date 11-22-78 Number H-131 County Rio Blanco

CB Shale oil Venture Name of Operation	Mine Kind of Operation: Mine, Mill, Quarry, etc.
Gilbert Corp. Name of Operator or Contractor	P.O. drawer 1646 Rifle Colo. Operator's Address
Occidental Oil Shale Inc. Name of Owner or Possessor	2372 8 Rd box 2687 Grand Junctio Owner's Address
Robert Resign 242-8463 Name of Person in Charge	P.O. drawer 1646 Rifle Colo. Address and Telephone Number of Person in Charge
Colo State Comp. Name of Compensation Insurance Company	Shaft Development Products (List products or intended products)

Total men employed 75 Underground 0 Surface 75 Hours 24 Monthly Production

☒ Producing ☒ Development ☐ Part-Time ☐ Exploration ☐ Idle Other

Number of accidents to date this year 2 Were they reported to the Division of Mines? yes

Location of Property Tract C-B Sec. 12,18 T3S R96w

Date of last inspection 8-9-78 All references are to Bulletin 20

Having completed an inspection of the above named operation, I find that the items listed below must be given immediate attention in order to comply with Colorado Statutes and Division of Mines Rules and Regulations, CRS 1973, 34-40-113.

1. All employees shall wear safety glasses or shields when in or around a mine or plant. (Three employees working at the Generator station weren't wearing safety glasses.) Sec. 77 Para 3 57.14-8(2) 11-[illegible]

2. The danger-no smoking sign at the fuel dock shall be legible. Sec. 147 Para 7 (57.4-2) 11-24-78

Remarks:

Have former recommendations been complied with? yes

Persons accompanying Inspector:
George Glass — Title: Safety
Chris Nelson — Walker (Gilbert)

Cooperation received [illegible]

Metal Mining Inspector — District ( )

I have received a copy of this report for the Operator:

Signed: George Glass Title Safety Supervisor

Address

Telephone Number 486-3741

READ, KNOW AND PRACTICE YOUR SAFETY RULES

CDM I (Rev. 10-77)

TABLE III G-4

RECEIVED OCT 16 1978

5730

Copy –

U.S. DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

Mailing Address:
P.O. Box 25367, DFC
Denver, Colorado 80225

Street Address:
730 Simms
Lakewood, Colorado 80215

October 10, 1978

File HLS 5-5

Jack Dietrich, Resident Construction Manager
Ralph Parsons Engineering
Piceance Creek Road
Rio Blanco, CO 81651

Dear Mr. Dietrich:

The enclosed inspection report covers a Federal inspection of the C. B. Shale Oil Venture, I.D. Number 05-03148, Rio Blanco, Colorado, conducted September 6, 1978. The inspection was made pursuant to Public Law 91-173 (83 STAT. 742) as amended by Public Law 95-164 (91 STAT. 1290).

The type and number of actions taken during the inspection were:

ORIGINAL ACTION THIS INSPECTION	TYPE AND NUMBER OF:		
	Citations	Orders	Other
Issuances	1		
Terminations			
Modifications			
Extensions			
ACTIONS ON PREVIOUS VIOLATIONS			
Modifications			
Extensions			
Terminations			

Figures for the second quarter 1978 are:

Incidence Rate:	Fatal	Nonfatal
Industry	.04	3.93
This Operation	0	0

Sincerely yours,

Roland V. Wilson

Roland V. Wilson
Subdistrict Manager

Enclsoure
cc: Bill Shriver, Construction Manager
Nielsons, Inc.
Peter A. Rutledge, Area Oil Supervisor
E. Levi Brake, Safety Manager
Colorado Division of Mines

MSHA 7000-4 (3-78)
INSPECTOR'S STATEMENT

DATE 090678 NO. 0325215

Page 2 of 3

TABLE III G-4

Violation of -
Part and Section 57 - 0015 · 0001 of Title 30 Code of Federal Regulations
Section ____ - ___ of the Act.

Negligence:

1. The condition of practice cited
   - ☐ Could not have been known or predicted; or occurred due to circumstances beyond the operator's control.
   - ☐ Had been recorded prior to shift during which it was cited and should have been corrected. If so, state time and date recorded:
   - ☒ Should have been known to operator. On what facts do you base this conclusion?

Operator should of been aware that certain safety measures must be met before using corrosive chemicals.

   - ☐ Was known by operator and should have been corrected. On what facts do you base this conclusion:
   - ☐ This type violation occurs frequently at this mine. Explain:
   - ☐ Section foreman and/or any other supervisory personnel made statements indicating that he/they caused, observed, or knew about violation. If so, identify person and state what was said:
   - ☐ Other miners made statements regarding the violation. If so, identify miners and what was said:

Gravity:

1. The occurrence of the event against which the cited standard is directed was:

☐ Improbable ☒ Probable ☐ Imminent ☐ Occurred

Explain: Without water or neutralizing agent being immediately present. And a person was to get burned the gravity of the burn would be greatly increase

2. What other events would have to occur before an accident would have resulted from the violation:

3. The injury resulting from or contemplated by the occurrence of the event could reasonably be expected to be:

☐ No lost workdays (Degree 6) ☐ Lost workdays or restricted duty (Degree 3-5) ☒ Permanently Disabling (Degree 2) ☐ Fatal (Degree 1)

Explain: Loss of eye sight could result from burns from phosphoric Acid and also burns on the body.

4. Number of persons who would be affected if the event occurred or were to occur: One

5. Area of the mine that would have been affected were the event to occur:

☐ Working Face ☐ Working Section ☐ Entire Mine ☒ Other Pipe cleaning station

6. Conditions or circumstances which might have increased the likelihood or severity of the event: N/A

Good Faith:

1. The condition was corrected: ☒ Within the time specified for abatement, including extensions
   ☐ After a withdrawal order was issued

Remarks:

2. Management took extraordinary steps to gain compliance by

Inspector's Signature Michael T. Romaskey

DAR 0238

TABLE III G-4

Page 3 of 3

UNITED STATES DEPARTMENT OF LABOR – MINE SAFETY AND HEALTH ADMINISTRATION
MSHA FORM 7000-3 (3-78)

No 325215

☒ CITATION (SEE REVERSE) ☐ ORDER OF WITHDRAWAL (SEE REVERSE)

DATE 09/06/78 (MO DA YR) TIME 1435 (24 HR CLOCK)

SERVED TO George Glass

OPERATOR Ralph M. Parsons Co.

MINE C.B. Shale Oil Venture

MINE I.D. 05-03148-___ (CONTRACTOR)

TYPE OF ACTION (SEE REVERSE) 104-A-_,___-_-_

VIOLATION OF SECTION ___-_-_ OF THE ACT OR OF TITLE 30 CODE OF FEDERAL REGULATIONS:

PART AND SECTION 57.0015-00001

TYPE OF INSPECTION 004

☒ SIGNIFICANT AND SUBSTANTIAL (SEE REVERSE)

CONDITION OR PRACTICE Water or neutralizing agent was not made available where an employee of Weyher Construction was using phosphoric acid to clean pipe.

AREA OR EQUIPMENT

INITIAL ACTION ☐ NOTICE ☐ CITATION ☐ ORDER NO. ___ DATED __/__/__ (MO DA YR)

TERMINATION DUE DATE 09/08/78 (MO DA YR) TIME 1300 (24 HR CLOCK) SIGNATURE 023 (AR)

ACTION TO TERMINATE Abated 09-06-78

DATE __/__/__ (MO DA YR) TIME ___ (24 HR CLOCK) SIGNATURE ___ AR ☐ SEE SUBSEQUENT ACTION SHEET

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GEOLOGY

III H GEOLOGY

The surface geology report was presented in Quarterly Data Report #5 and in the Annual Summary and Trends Report.

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DATA AUTOMATION

DEVELOPMENT MONITORING PROGRAMS

IV DATA AUTOMATION

The environmental data base at present is partially manual and partially computerized. For purposes of analysis, data specificity, data security, and data archiving it is being further computerized. It is the intent that all "indicator variables" be entered into RAMIS (Rapid Access Management Information System). Toward this end computer codes have been designed for all environmental station locations and are presented; automation status is reported.

DEVELOPMENT MONITORING PROGRAMS

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STATION LOCATION

DEVELOPMENT MONITORING PR

V B AUTOMATION STATUS AND SCHEDULE

This section presents the status and schedule of the automated data base for the C-b Tract environmental data on the Occidental Petroleum Corporation computer system in Houston, Texas.

V B-1 RAMIS DATA BASE

RAMIS II is a computerized data base management system (DBMS) used by the C-b Shale Oil Venture via the Occidental Computer Center in Houston, Texas. C-b Shale Oil Tract environmental data are being prepared and entered into RAMIS DBMS as a means of making relevant data available for subsequent retrievals for use in reports and impact analyses. The use of this system provides an economical way to store and retrieve selected data in desired formats for reports and for input to analytic models requiring the data.

IV B-2 STATUS

The following environmental data are entered into RAMIS DBMS as of January, 1979:

Water Quality	
Springs and Seeps	Oct 1974 thru July 1978
Alluvial Wells	Oct 1974 thru July 1978
Upper Aquifer Wells	Oct 1974 thru July 1978
Lower Aquifer Wells	Oct 1974 thru July 1978
Well Water Levels	
Water Levels	Oct 1974 thru July 1978
Air Quality	
Small Trailer (Station AB21, AB22, AB24)	Oct 1974 thru Oct 1976
Large Trailer (Station AB20)	Oct 1974 thru Oct 1976
Large Trailer (Station AB23)	Oct 1974 thru Dec 1977
Meteorological Tower (Station AA23)	Oct 1974 thru Dec 1977

Figures IV B-1 thru IV B-5 show graphically the status of water quality, air quality, and meteorological data that have been entered into RAMIS DBMS as of January 1, 1979.

Data in RAMIS reside in six files which are presented in Tables IV B-1 thru IV B-6. The tables present the list of fieldnames and synonyms. Additional data in the tables are the field and file structure specifications.

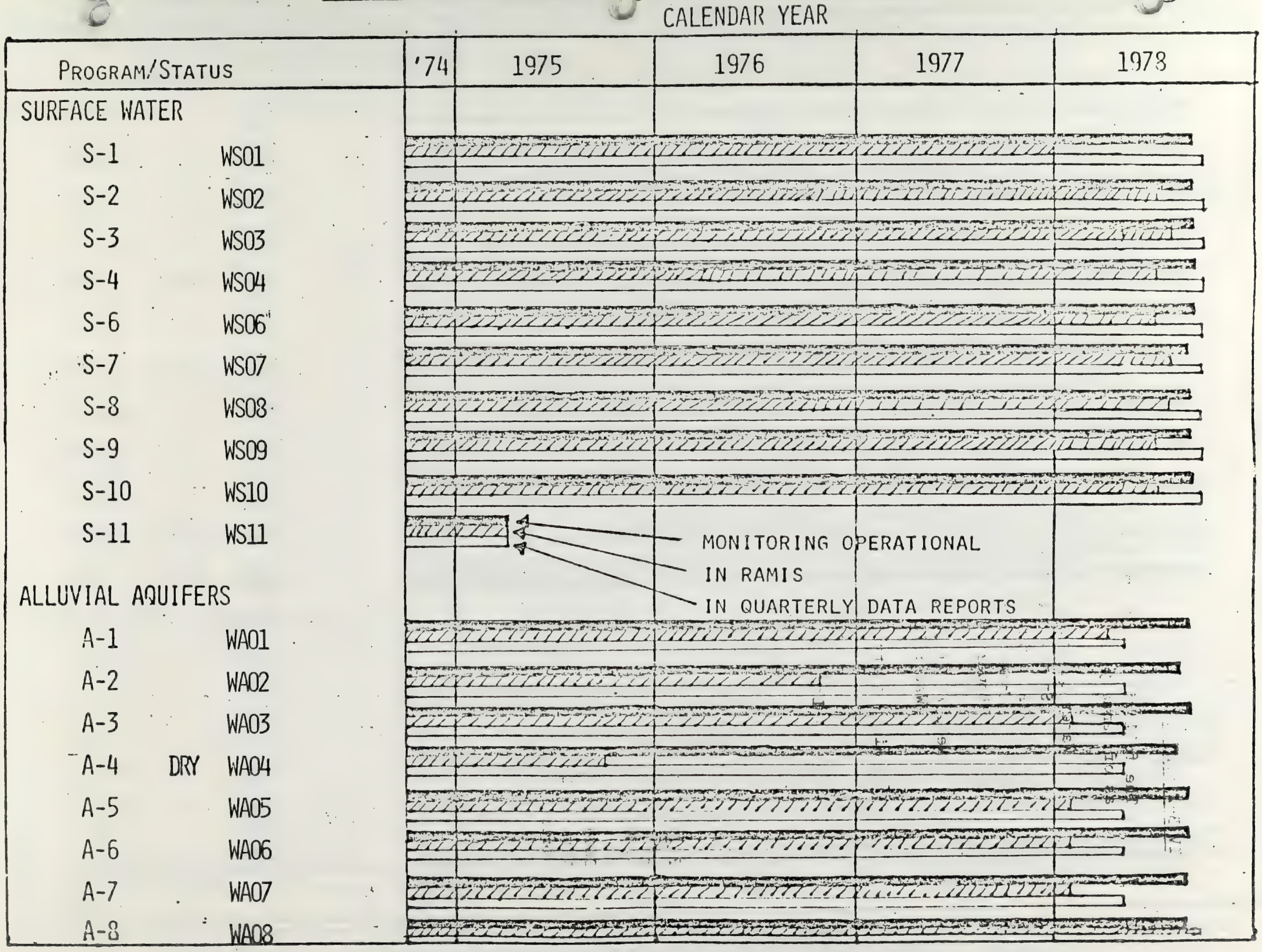

CALENDAR YEAR
PROGRAM/STATUS
'74
1975
1976
1977
1978
SURFACE WATER
S-1 WS01
S-2 WS02
S-3 WS03
S-4 WS04
S-6 WS06
S-7 WS07
S-8 WS08
S-9 WS09
S-10 WS10
S-11 WS11
MONITORING OPERATIONAL
IN RAMIS
IN QUARTERLY DATA REPORTS
ALLUVIAL AQUIFERS
A-1 WA01
A-2 WA02
A-3 WA03
A-4 DRY WA04
A-5 WA05
A-6 WA06
A-7 WA07
A-8 WA08

FIGURE IV B-2 HYDROLOGY MONITORING/REPORTING/DATA BASE STATUS - CONT'D

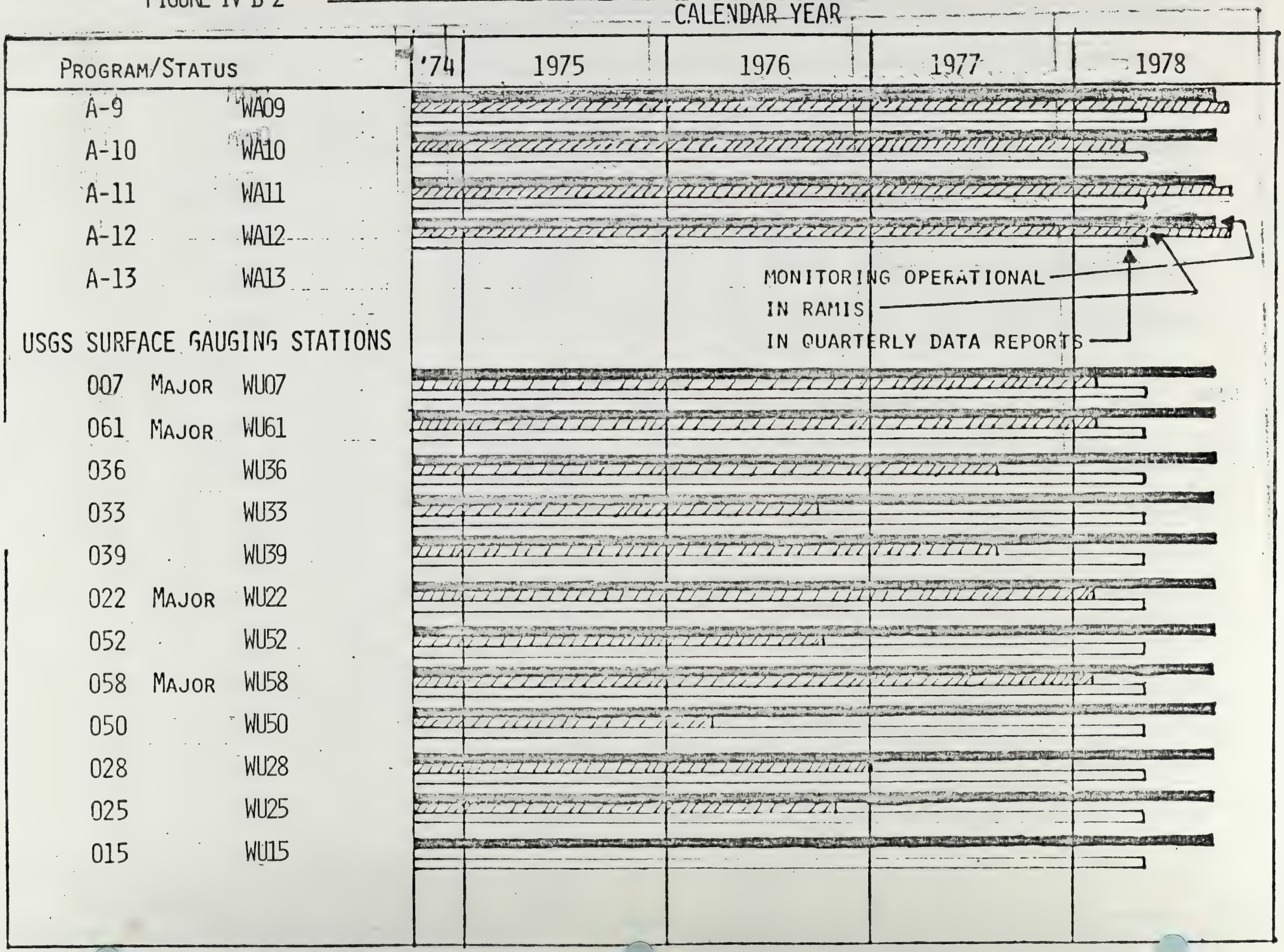


FIGURE IV B-5

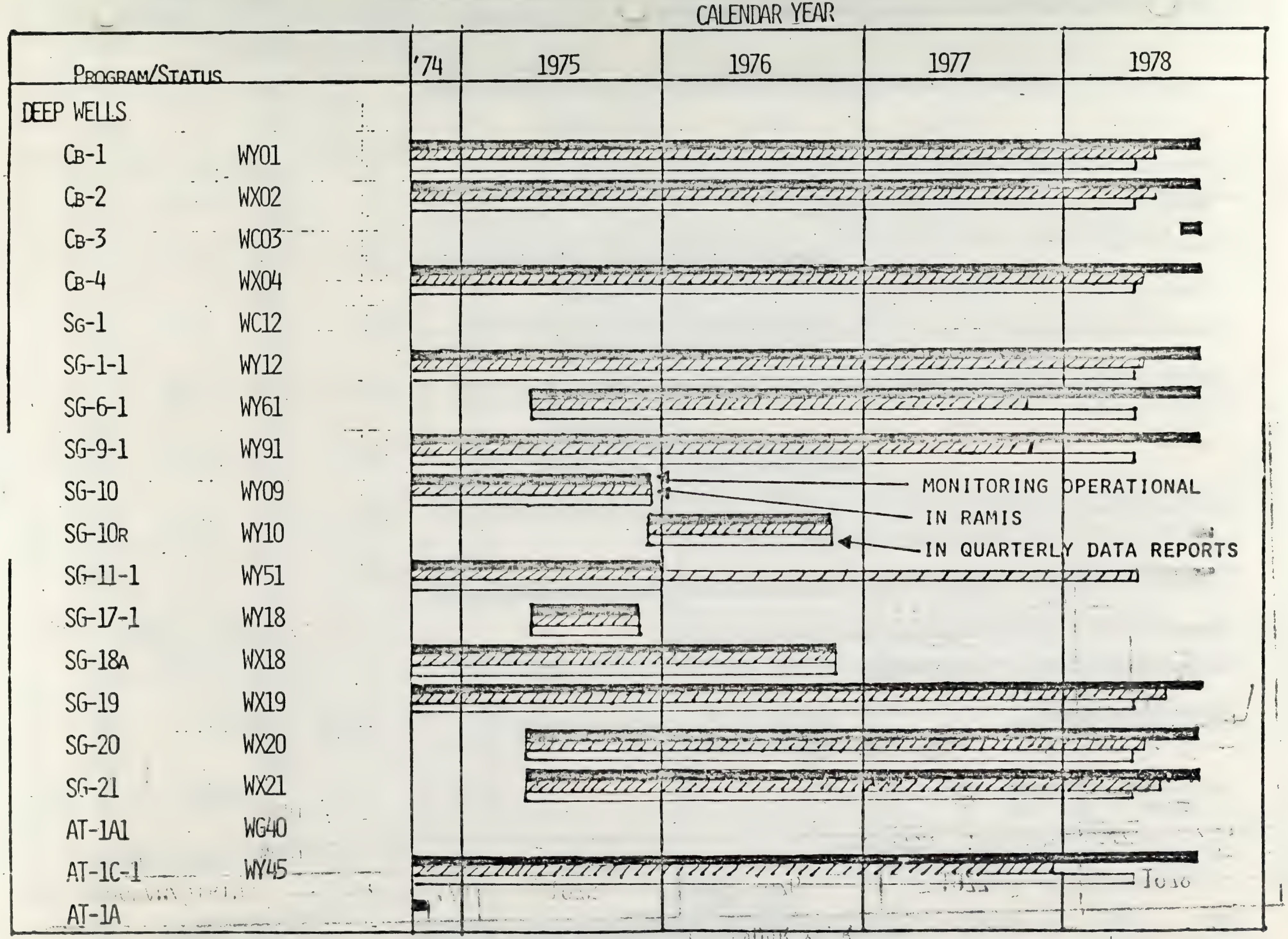

CALENDAR YEAR
PROGRAM/STATUS
'74
1975
1976
1977
1978
DEEP WELLS
CB-1 WY01
CB-2 WX02
CB-3 WC03
CB-4 WX04
SG-1 WC12
SG-1-1 WY12
SG-6-1 WY61
SG-9-1 WY91
SG-10 WY09
SG-10R WY10
SG-11-1 WY51
SG-17-1 WY18
SG-18A WX18
SG-19 WX19
SG-20 WX20
SG-21 WX21
AT-1A1 WG40
AT-1C-1 WY45
AT-1A
MONITORING OPERATIONAL
IN RAMIS
IN QUARTERLY DATA REPORTS

FIGURE IV.B-4 HYDROLOGY MONITORING/REPORTING/DATA BASE STATUS - CONT'D

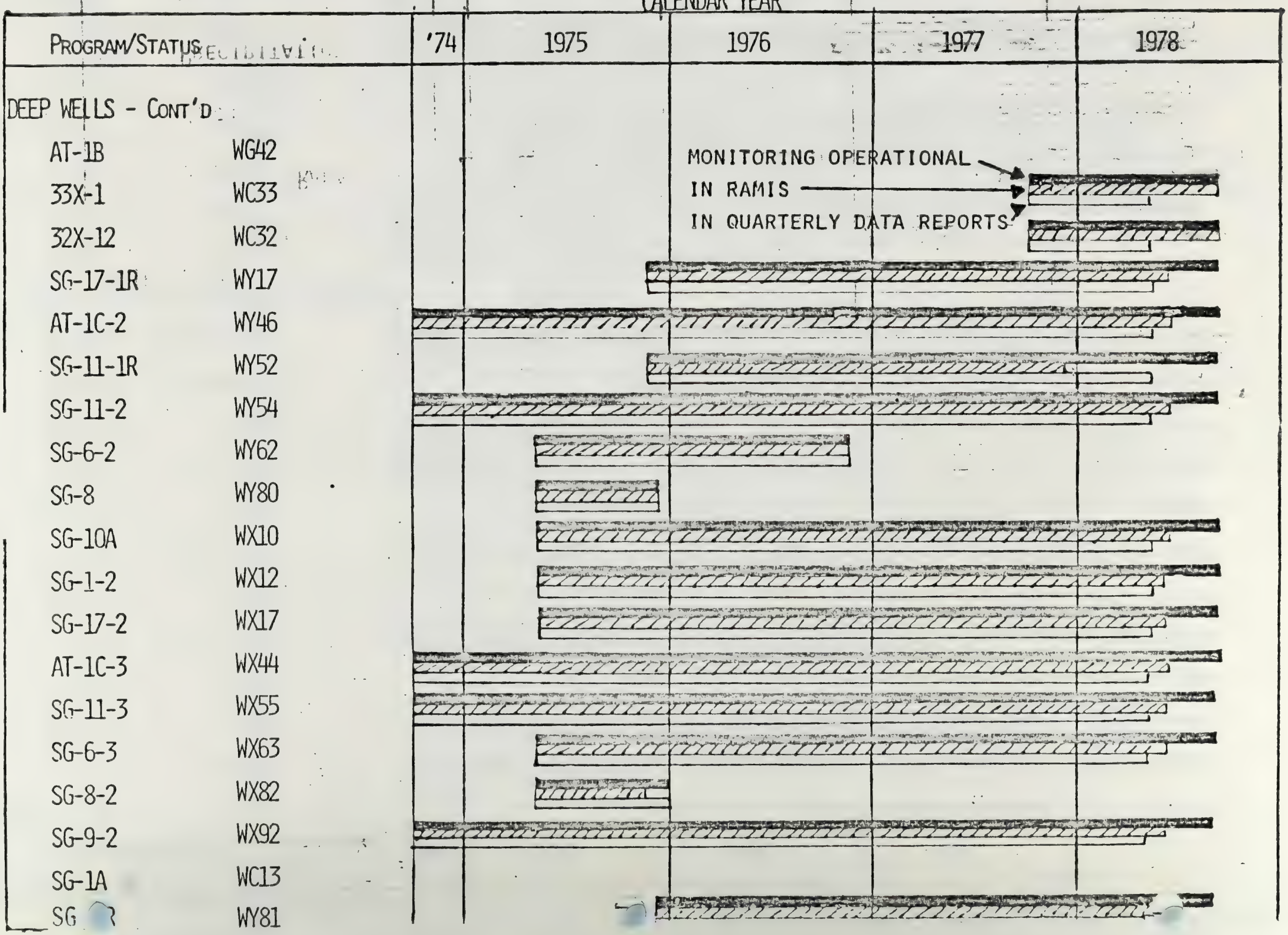


FIGURE IV B-5 AIR QUALITY MONITORING/REPORTING/DATA BASE STATUS

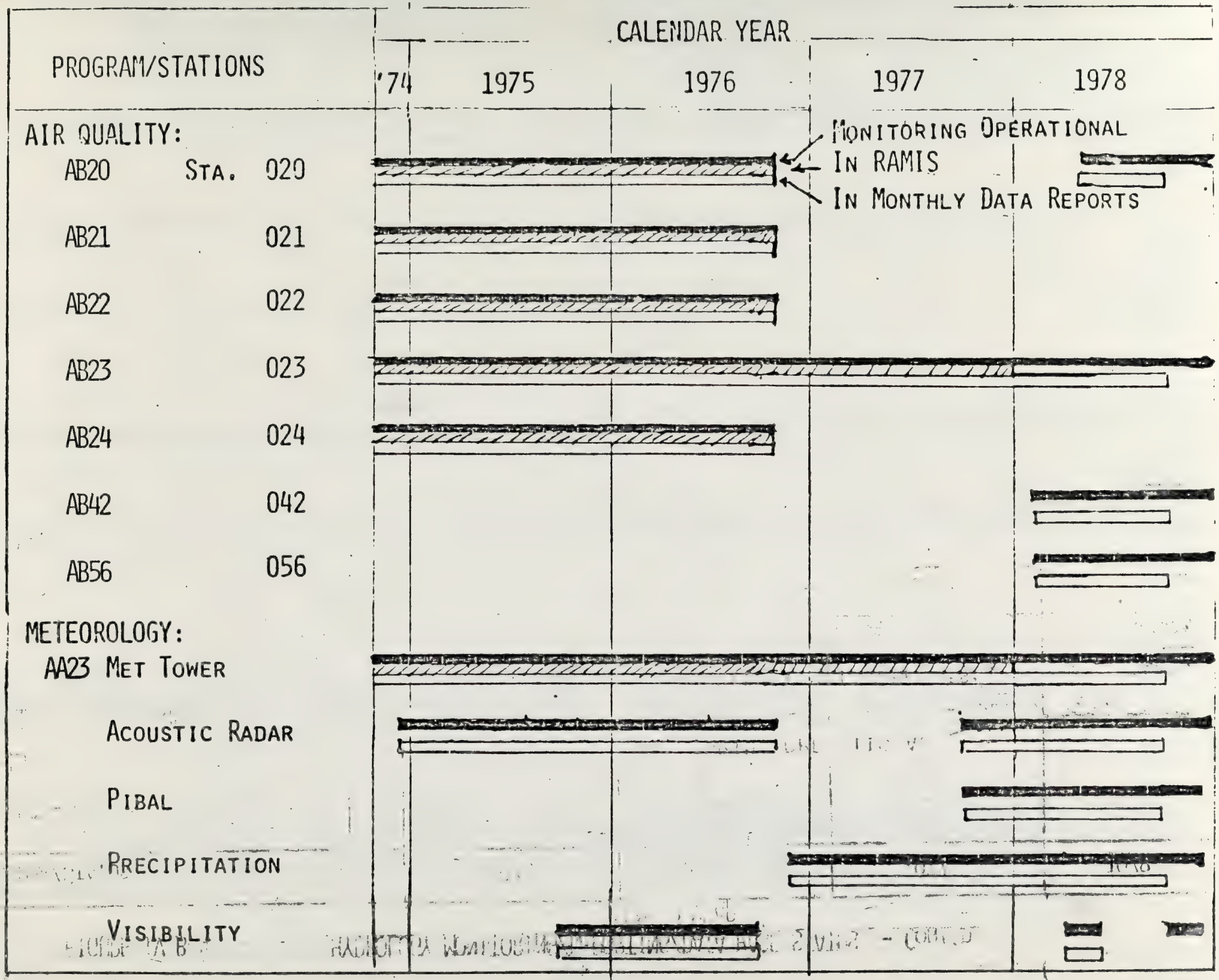


TABLE IV B-1

DESCRIPTION FOR RAMIS FILE WTRQUAL (Water Quality File)

05/02/78

LIST	FIELDNAME	SYNONYM	LEVEL	LEVEL TYPE	SEGMENT FACTOR	TYPE	LENGTH
1	LOCATION	LOC	1	S	10	A	4
2	YEAR	YR	2	S	1	I	2
3	MONTH	MO	3	S	1	I	2
4	DUMMY1		4	S	1	F	7.3
5	ALKALINITY	ALK	4	S	1	F	7.1
6	ALUMINUM	AL	4	S	1	F	6.3
7	ARSENIC	AS	4	S	1	F	5.3
8	BACTERIA	BACT	4	S	1	F	7.3
9	BARIUM	BA	4	S	1	F	5.2
10	BICARBONATE	HCO3	4	S	1	F	7.1
11	BIOOXYDEMD	BOD	4	S	1	F	6.1
12	BORON	B	4	S	1	F	7.3
13	BROMINE	BR	4	S	1	F	6.3
14	DUMMY2		4	S	1	F	7.3
15	CADMIUM	CD	4	S	1	F	6.3
16	CALCIUM	CA	4	S	1	F	6.1
17	CARBONATE	CO3	4	S	1	F	7.1
18	CHLORIDE	CL	4	S	1	F	7.1
19	CHROMIUM	CR	4	S	1	F	6.3
20	CHEMOXYDEM	COD	4	S	1	F	7.1
21	COPPER	CU	4	S	1	F	6.3
22	DISSOXY	DO	4	S	1	F	4.1
23	DISSORGCARB	DOC	4	S	1	F	5.1
24	DUMMY3		4	S	1	F	7.3
25	FLORIDE	F	4	S	1	F	7.2
26	HARDNESS	HARD	4	S	1	F	7.1
27	IRON	FE	4	S	1	F	5.2
28	KJELDNIT	KJN	4	S	1	F	7.3
29	LEAD	PB	4	S	1	F	6.3
30	LITHIUM	LI	4	S	1	F	5.1
31	MAGNESIUM	MG	4	S	1	F	5.1
32	MANGANESE	MN	4	S	1	F	6.3
33	MERCURY	HG	4	S	1	D	8.5
34	MOLYBDENUM	MO	4	S	1	F	6.3
35	NICKEL	NI	4	S	1	F	6.3
36	NITRATE	NO3	4	S	1	F	6.2
37	OILGREASE	OLGR	4	S	1	F	7.3
38	DUMMY4		4	S	1	F	7.3
39	PH	PH	4	S	1	F	3.1
40	POTASSIUM	K	4	S	1	F	5.1
41	ALPHARADIO	RA	4	S	1	F	5.1
42	BETARADIO	BTR	4	S	1	F	5.1
43	RADIUMRADIO	RR	4	S	1	F	7.3
44	SELENIUM	SE	4	S	1	F	6.3
45	SILVER	AG	4	S	1	F	6.3
46	SODIUM	NA	4	S	1	F	7.1
47	SOLIDSDISS	TDS	4	S	1	F	7.1
48	SOLUSOLIDS	SOLS	4	S	1	F	7.1
49	SPECCOND	SPC	4	S	1	F	7.1
50	STRONTIUM	SR	4	S	1	F	4.1
51	SULFATE	SO4	4	S	1	F	6.1
52	TEMP	TEMP	4	S	1	F	4.1
53	ZINC	ZN	4	S	1	F	6.3
54	TOTORGCARB	TOC	4	S	1	F	5.1
55	PHENOLS	PHEN	4	S	1	F	6.4
56	CYANIDE	CYAN	4	S	1	F	6.3
57	AMMONIA	NH3	4	S	1	F	6.2
58	PHOSPHATE	PHOSAT	4	S	1	F	6.2

ABLE IV B-I (con't)

```
      DESCRIPTION FOR RAMIS FILE WTRQUAL (Water Quality File)
              05/02/78

                                                  LEVEL   SEGMENT
IST   FIELDNAME      SYNONYM            LEVEL   TYPE    FACTOR    TYPE   LENGTH
---   ---------      -------            -----   -----   -------   ----   ------
 59   SILICA         SILIC                4       S        1       F      6.1
 60   URANIUM        U                    4       S        1       F      5.3
 61   DUMMY6                              4       S        1       F      7.3
 62   THORIUM        TH                   4       S        1       F      6.3
 63   CESIUM         CS                   4       S        1       F      6.3
 64   IODINE         I                    4       S        1       F      6.3
 65   ANTIMONY       SB                   4       S        1       F      6.3
 66   ZIRCONIUM      ZR                   4       S        1       F      6.3
 67   YTTRIUM        Y                    4       S        1       F      5.3
 68   RUBIDIUM       RB                   4       S        1       F      6.3
 69   GERMANIUM      GE                   4       S        1       F      6.3
 70   GALLIUM        GA                   4       S        1       F      6.3
 71   TITANIUM       TI                   4       S        1       F      6.3
 72   SCANDIUM       SC                   4       S        1       F      6.3
 73   TUNGSTEN       W                    4       S        1       F      6.3
 74   COBALT         CO                   4       S        1       F      6.3
 75   VANADIUM       V                    4       S        1       F      6.3
 76   BERYLLIUM      BE                   4       S        1       F      5.3
 77   HYDROXIDES     OH                   4       S        1       F      5.1
 78   CONDHYDCARB    CH                   4       S        1       F      7.3
 79   PALK           PA                   4       S        1       F      7.1
 80   MOALK          MA                   4       S        1       F      7.1
 81   DUMMY10                             4       S        1       F      7.3

UMBER OF RECORDS IN TABLE=       81   LINES=     81
```

TABLE IV B-2

```
      DESCRIPTION FOR RAMIS FILE WTRLEV (Well Water Level File)
                05/02/78

                                                 LEVEL  SEGMENT
 IST   FIELDNAME       SYNONYM            LEVEL  TYPE   FACTOR    TYPE  LENGTH
----   ---------       -------            -----  -----  -------   ----  ------
   1   YEAR            YR                 1      S          1     I     2
   2   MONTH           MO                 2      S         12     I     2
   3   LOCATION        LOC                2      S          5     A     4
   4   GRDLEVEL        GL                 4      V          0     F     6.1
   5   MEASPTEL        MP                 4      V          0     F     6.1
   6   DEPTH           DP                 5                 5     F     7.2

 NUMBER OF RECORDS IN TABLE=              6   LINES=      6
>
```

Table IV B — 3

```
      DESCRIPTION FOR RAMIS FILE USGS
                01/05/79

                                                LEVEL   SEGMENT
LIST  FIELDNAME       SYNONYM         LEVEL     TYPE    FACTOR    TYPE   LENGTH
----  ---------       -------         -----     -----   -------   ----   ------
   1  LOCATION                        1                    0      A      4
   2  YEAR                            2                    0      I      2
   3  MONTH                           3                    0      I      2
   4  DAY                             4                    0      I      2
   5  ALK                             5                    0      F      7.2
   6  NH3                             5                    0      F      7.2
   7  B                               5                    0      F      7.2
   8  CA                              5                    0      F      7.2
   9  F                               5                    0      F      7.2
  10  FE                              5                    0      F      7.2
  11  MG                              5                    0      F      7.2
  12  K                               5                    0      F      7.2
  13  SIO2                            5                    0      F      7.2
  14  NA                              5                    0      F      7.2
  15  HCO3                            5                    0      F      7.2
  16  CO3                             5                    0      F      7.2
  17  CL                              5                    0      F      7.2
  18  SPECCOND                        5                    0      F      7.2
  19  TDS                             5                    0      F      7.2
  20  KJELN2                          5                    0      F      7.2
  21  NO32                            5                    0      F      7.2
  22  AS                              5                    0      F      7.2
  23  MN                              5                    0      F      7.2
  24  PO4                             5                    0      F      7.2
  25  DOC                             5                    0      F      7.2
  26  SOC                             5                    0      F      7.2
  27  SO4                             5                    0      F      7.2
  28  SED                             5                    0      F      7.2
  29  WEATHER                         5                    0      F      7.2
  30  PH                              5                    0      F      7.2
  31  TEMP                            5                    0      F      7.2
  32  FLOW                            5                    0      F      7.2
  33  AL                              5                    0      F      7.2
  34  BR                              5                    0      F      7.2
  35  BA                              5                    0      F      7.2
  36  CD                              5                    0      F      7.2
  37  CU                              5                    0      F      7.2
  38  CR                              5                    0      F      7.2
  39  OG                              5                    0      F      7.2
  40  PB                              5                    0      F      7.2
  41  LI                              5                    0      F      7.2
  42  HG                              5                    0      F      7.2
  43  MO                              5                    0      F      7.2
  44  SE                              5                    0      F      7.2
  45  S                               5                    0      F      7.2
  46  ZN                              5                    0      F      7.2
  47  CN                              5                    0      F      7.2
  48  SR                              5                    0      F      7.2
  49  COLI45                          5                    0      F      7.2
  50  COLI7                           5                    0      F      7.2
  51  STREP                           5                    0      F      7.2
  52  TCOLI                           5                    0      F      7.2
  53  COD                             5                    0      F      7.2
  54  BOD                             5                    0      F      7.2
  55  PHENOL                          5                    0      F      7.2
  56  ESCAN                           5                    0      F      7.2
  57  DGAR                            5                    0      F      7.2
  58  DGBR                            5                    0      F      7.2
  59  SGAR                            5                    0      F      7.2
  60  SGBR                            5                    0      F      7.2
  61  HARD                            5                    0      F      7.2
```

TABLE IV B-4

```
        DESCRIPTION FOR RAMIS FILE STLAIR (Small Trailer File)
                  05/02/78

                                                  LEVEL    SEGMENT
LIST   FIELDNAME        SYNONYM         LEVEL     TYPE     FACTOR     TYPE   LENGTH
----   ----------       -------         -----     -----    -------    ----   ------
   1   TRAILER          TRL               1        S          3        A      3
   2   YEAR             YR                2        S          0        A      2
   3   MONTH            MO                2        S          0        A      2
   4   DAY              DY                3        S         31        A      2
   5   HOUR             HR                3        S         31        A      2
   6   SULFDIOX         SO2               3        S         31        F      6.1
   7   WINDSP30         WS                3        S         31        F      6.1
   8   WINDDIR30        WD                3        S         31        F      6.1
   9   RELATHUMID       RH                3        S         31        F      6.1
  10   TEMINTRL         TIN               3        S         31        F      6.1
  11   TEMOUT30         TOUT              3        S         31        F      6.1
  12   HYDROGSULF       H2S               3        S         31        F      6.1
  13   LINEVOLT         VOLT              3        S         31        F      6.1
  14   BARPRESS         PRES              3        S         31        F      6.1
  15   WINDSTDDEV       WSD               3        S         31        F      6.1
  16   RAINFALL         RAIN              3        S         31        F      6.1

  NUMBER OF RECORDS IN TABLE=       16   LINES=     16
>
```

ABLE IV B-5

DESCRIPTION FOR RAMIS FILE LTLAIR (Large Trailer File)
05/02/78

```
                                                        LEVEL   SEGMENT
IST    FIELDNAME           SYNONYM            LEVEL     TYPE    FACTOR     TYPE   LENGTH
---    ---------           -------            -----     -----   -------    ----   ------
   1   TRAILER             TRL                  1        S         2        A      3
   2   YEAR                YR                   2        S         0        A      2
   3   MONTH               MO                   2        S         0        A      2
   4   DAY                 DY                   3        S        31        A      2
   5   HOUR                HR                   3        S        31        A      2
   6   NITROGOX            NOX                  3        S        31        F      6.1
   7   NITRICOX            NO                   3        S        31        F      6.1
   8   SULFDIOX            SO2                  3        S        31        F      6.1
   9   WINDSP30            WS                   3        S        31        F      6.1
  10   WINDDIR30           WD                   3        S        31        F      6.1
  11   RELATHUMID          RH                   3        S        31        F      6.1
  12   TEMINTRL            TIN                  3        S        31        F      6.1
  13   TEMOUT30            TOUT                 3        S        31        F      6.1
  14   SOLRAD              SR                   3        S        31        F      6.1
  15   HYDROGSULF          H2S                  3        S        31        F      6.1
  16   LINEVOLT            VOLT                 3        S        31        F      6.1
  17   TOTHYDCARB          THC                  3        S        31        F      6.1
  18   METHANE             CH4                  3        S        31        F      6.1
  19   CARBMONOX           CO                   3        S        31        F      6.1
  20   OZONE               O3                   3        S        31        F      6.1
  21   BARPRESS            PRES                 3        S        31        F      6.1
  22   WINDSTDDEV          WSD                  3        S        31        F      6.1
  23   RAINFALL            RAIN                 3        S        31        F      6.1
  24   NITROGDIOX          NO2                  3        S        31        F      6.1
  25   NONMETHHC           NMHC                 3        S        31        F      6.1

NUMBER OF RECORDS IN TABLE=      25   LINES=     25
```

TABLE IV B-6

```
DESCRIPTION FOR RAMIS FILE METAIR (Meteorological Tower File)
             05/02/78

                                               LEVEL    SEGMENT
LIST  FIELDNAME       SYNONYM         LEVEL    TYPE     FACTOR    TYPE   LENGTH
----  ---------       -------         -----    -----    -------   ----   ------
   1  TOWER           TOW               1        S          1      A     3
   2  YEAR            YR                2        S          0      A     2
   3  MONTH           MO                2        S          0      A     2
   4  DAY             DY                3        S         31      A     2
   5  HOUR            HR                3        S         31      A     2
   6  WINDSP8         WS1               3        S         31      F     6.1
   7  WINDDIR8        WD1               3        S         31      F     6.1
   8  RELHUMD8        RH1               3        S         31      F     6.1
   9  TEMP8           TMP1              3        S         31      F     6.1
  10  WINDSP30        WS2               3        S         31      F     6.1
  11  WINDDIR30       WD2               3        S         31      F     6.1
  12  RELHUM30        RH2               3        S         31      F     6.1
  13  TEMP30          TMP2              3        S         31      F     6.1
  14  WINDSP100       WS3               3        S         31      F     6.1
  15  WINDDIR100      WD3               3        S         31      F     6.1
  16  RELHUM100       RH3               3        S         31      F     6.1
  17  TEMP100         TMP3              3        S         31      F     6.1
  18  WINDSP200       WS4               3        S         31      F     6.1
  19  WINDDIR200      WD4               3        S         31      F     6.1
  20  RELHUM200       RH4               3        S         31      F     6.1
  21  TEMP200         TMP4              3        S         31      F     6.1
  22  DELTTEMP1       DT1               3        S         31      F     6.1
  23  DELTTEMP2       DT2               3        S         31      F     6.1
  24  BIVWS30         BWS1              3        S         31      F     6.1
  25  HORWD30         HWD1              3        S         31      F     6.1
  26  VERTWD30        VWD1              3        S         31      F     6.1
  27  BIVWS100        BWS2              3        S         31      F     6.1
  28  HORWD100        HWD2              3        S         31      F     6.1
  29  VERTWD100       VWD2              3        S         31      F     6.1
  30  BIVWS200        BWS3              3        S         31      F     6.1
  31  HORWD200        HWD3              3        S         31      F     6.1
  32  VERTWD200       VWD3              3        S         31      F     6.1
  33  WINDSD8         WDV1              3        S         31      F     6.1
  34  WINDSD30        WDV2              3        S         31      F     6.1
  35  WINDSD100       WDV3              3        S         31      F     6.1
  36  WINDSD200       WDV4              3        S         31      F     6.1
  37  HWINDSD30       HSD1              3        S         31      F     6.1
  38  VWINDSD30       VSD1              3        S         31      F     6.1
  39  HWINDSD100      HSD2              3        S         31      F     6.1
  40  VWINDSD100      VSD2              3        S         31      F     6.1
  41  HWINDSD200      HSD3              3        S         31      F     6.1
  42  VWINDSD200      VSD3              3        S         31      F     6.1

  NUMBER OF RECORDS IN TABLE=      42   LINES=     42
>
```

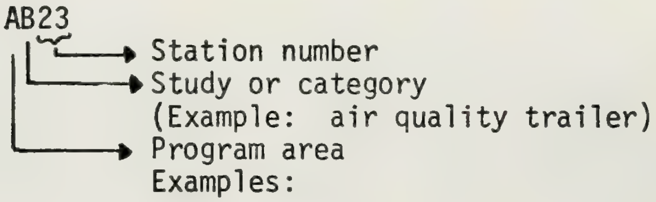
IV A STATION LOCATION

IV A-1 STATION COORDINATES

Environmental station and pollutant source coordinates will be specified by the Colorado Coordinate System and/or by latitude and longitude. A brief investigation is underway to decide the merits of each. They will also be grossly specified by section, range, and township. Results are expected to be presented in the next data report for the environmental stations.

IV A-2 COMPUTER STATION CODE

A four-digit computer station code has been designed for identifying stations in RAMIS. It consists of two letters followed by two numbers:


AB23

Station number

Study or category
(Example: air quality trailer)

Program area
Examples:

A = air
N = noise
W = water
B = biology

This code is presented on Table IV A-1 for the environmental program. Associated station maps appearing in this report are:

	Figure	Page
Air	II B-1	II B-3
Noise	II B-5	II B-187
Water	II A-1	II A-3
	II A-2	II A-303
	II A-3	II A-311
	II A-4	II A-326
Biology	II C-1	II C-3

TABLE IV A-1
COMPUTER STATION CODES

		Sta. Designation	Computer Code
I	Air Quality & Meteorology		
	Met. Tower:	@ Sta 023	AA23
	Trailers:	Sta 020	AB20
		021	AB21
		022	AB22
		023	AB23
		024	AB24
	Acoustic Radar	Sta 020	AC20
		021	AC21
		023	AC23
	MRI and Particulates	Sta 031	AD31
		032	AD32
		033	AD33
		041	AD41
		042	AD42
		043	AD43
		044	AD44
		056	AD56
II	Noise		
	Traffic Noise	Sta II	NA02
		IX	NA09
		XV	NB15
III	Water		
	USGS Stream Gauging Sta.	090306007	WU07
		36	WU36
		39	WU39
		42	WU42
		61	WU61
		50	WU50
		52	WU52
		58	WU58
		33	WU33
		25	WU25
		15	WU15
		08	WU08
		22	WU22
	Springs & Seeps	S-1	WS01
		2	WS02
		3	WS03
		4	WS04
		6	WS06
		7	WS07
		8	WS08
		9	WS09
		10	WS10
		S-A	WS11
	Alluvial Wells	A-1	WA01
		A-2	WA02
		-2A	WA14
		3	WA03
		3A	WA15
		4	WA04

		Computer Code
Water Cont'd		
Alluvial Wells Cont'd	5	WA05
	5A	WA16
	6	WA06
	6A	WA17
	7	WA07
	7A	WA18
	8	WA08
	9	WA09
	10	WA10
	11	WA11
	12	WA12
	13	WA13

TABLE IV A-1

Deep Wells

UPPER AQUIFER

Baseline and Before Recompletions		U1 Level (String 1) After Recompletions		UPC1 Level (String 2) After Recompletions		UPC2 Level (String 3 After Recompletions	
STA.	CODE	STA.	CODE	STA.	CODE	STA.	CODE
CB-2	WX02	CB-2	WC02	CB-2	WD02		
		CB-3	WC03			CB-3	WE03
CB-4	WX04	CB-4	WC04			CB-4	WE04
		AT-1B	WC41	AT-1B-3	WD43		
AT-1C-3	WX44						
SG-1-2	WX12	SG-1	WC12	SG-1	WD12		
		SG-1A	WC13	SG-1A-2	WD13		
SG-6-3	WX63	SG-6	WC60	SG-6-3	WD63	SG-6-1	WE61
SG-8-2	WX82						
SG-9-2	WX92	SG-9	WC90			SG-9-2	WE92
SG-10A	WX10	SG-10A	WC10	SG-10A-2	WD10	SG-10A-1	WE10
SG-11-3	WX55	SG-11	WC50	SG-11-3	WD55	SG-11-2	WE54
SG-17-2	WX17	SG-17	WC17	SG-17-3	WD17	SG-17-2	WE17
SG-18A	WX18	SG-18A	WC18	SG-18A-3	WD18	SG-18A-2	WE18
SG-19	WX19	SG-19	WC19				
SG-20	WX20	SG-20	WC20	SG-20-3	WD20	SG-20-2	WE20
SG-21	WX21	SG-21	WC21	SG-21-4	WD21	SG-21-3	WE21
		33X-1	WC33	33X-1-4	WD33	33X-1-3	WE33
		32X-12	WC32	32X12-4	WD32	32X12-3	WE32

Deep Wells (cont'd)

LOWER AQUIFER

Baseline and Before Recompletions		LPC3 Level (String 4) After Recompletions		LPC4 Level (String 5) After Recompletions		
STA.	CODE	STA.	CODE	STA.	CODE	
CB-1	WY01					
AT-1	WY44	AT-1A	WG40			
		AT-1B-1	WG42			
AT-1C-1	WY45					
AT-1C-2	WY46					
SG-1-1	WY12	SG-1-1	WG12			
SG-6-1	WY61					
SG-6-2	WY62	SG-6-2	WG62			
SG-8	WY80	SG-8-1	WG81	SG-8-2	WH82	
SG-8R	WY81					
SG-9-1	WY91	SG-9-1	WG91			
SG-10	WY09	SG-10	WG10			
SG-10R	WY10					
SG-11-1	WY51	SG-11-1	WG52			
SG-11-2	WY54					
SG-11-1R	WY52					
SG-17-1	WY18	SG-17-1	WG17			
SG-17-1R	WY17					
		SG-18A-1	WG18			
		SG-20-1	WG20			
		SG-21-2	WG21	SG-21-1	WH21	
		33X-1-2	WG33	ddX-1-1	WH33	
		32X-12-2	WG32	32X-12-1	WH32	

TABLE IV A-1

IV Biology

Program	General Location	Computer Code	*Analysis Codes
Deer Days Use	Between Hunter Cr. & Jimmy Gulch	BA01	PJ-CH-C
		BA02	PJ-CH-C
		BA03	PJ-CH-C
		BA04	PJ-CH-C
		BA05	PJ-CH-C
		BA06	PJ-CH-C
		BA07	PJ-CH-C
		BA08	PJ-CH-C
		BA09	PJ-CH-C
	North Side, Piceance Creek	BA10	PJ -D
		BA11	PJ -D
		BA12	PJ -D
		BA13	PJ -C
		BA14	PJ -C
		BA15	PJ -C
	South Side, Piceance Creek	BA16	PJ -D
	On Tract Bet. Willow & Scandard	BA17	PJ-CH-C
		BA18	PJ-CH-C
		BA19	PJ -C
	On Tract bet. Cottonwood & Sorghum	BA20	PJ-CH-D
		BA21	PJ-CH-D
		BA22	PJ -D
	On Tract bet. Sorghum & W. Fork Stewart	BA23	PJ-CH-D
		BA24	PJ -D
		BA25	PJ-CH-C
	On Tract bet. W.& M. Fork Stewart	BA26	PJ -C
		BA27	PJ -C
	On Tract bet. Willow & Scandard North End	BA28	PJ-CH-C
	On Tract bet. Willow & Scandard S.E.	BA29	PJ-CH-C
	On Tract bet. Cottonwood & Sorghum North	BA30	PJ-CH-C
	On Tract bet. Cottonwood & Sorghum South	BA31	PJ-CH-C

***ANALYSIS CODES:**

PJ-CH-C	-	Pinon Juniper, Chained, Control Station	(12)
PJ -C	-	Pinon Juniper, Control Station	(6)
PJ-CH-D	-	Pinon Juniper, Chained, Development Station	(3)
PJ -D	-	Pinon Juniper, Development Station	(6)

TABLE IV A-1

Biology (Cont'd)

Programs: Deer Distribution & Migration and Road Kills

Mile Marker	Location	Computer Code	
		North of Piceance Creek	South(Meadows) of Piceance Creek
41	White River City	BN41	BM41
40	Piceance Bridge	BN40	BM40
39	Lower Canyon	BN39	BM39
38	Piceance Canyon	BN38	BM38
37	Yellow Creek	BN37	BM37
36	Stinking Springs	BN36	BM36
35	Old Bridge	BN35	BM35
34	Little Hills Turnoff	BN34	BM34
33	Old Corrals & Buildings	BN33	BM33
32	Burk Ranch	BN32	BM32
31	2 Ranch	BN31	BM31
30		BN30	BM30
29		BN29	BM29
28	Bureau of Mines	BN28	BM28
27	Ryan Gulch	BN27	BM27
26	Pump Station	BN26	BM26
25		BN25	BM25
24	Rock School	BN24	BM24
23	AQ 021	BN23	BM23
22	Pat Johnson's Ranch	BN22	BM22
21	Hunter Creek	BN21	BM21
20	PL Gate	BN20	BM20
19	AQ 020	BN19	BM19
18	Sorghum, Cottonwood	BN18	BM18
17	Stewart Gulch Rd.	BN17	BM17
16	A Q Trailer 022	BN16	BM16
15	Oldland's Ranch	BN15	BM15
14	Oldland's Ranch	BN14	BM14
13	Pond and Cabin	BN13	BM13
12	Sprague Gulch	BN12	BM12
11	Cascade Gulch	BN11	BM11
10	13 Mile Gulch	BN10	BM10
9	14 Mile Gulch	BN09	BM09
8	Schutte Gulch	BN08	BM08
7	Robinson's Ranch	BN07	BM07
6		BN06	BM06
5	2 Old Cabins (35 MPH Curve)	BN05	BM05
4	McCarthy Gulch	BN04	BM04
3	Cow Creek	BN03	BM03
2	Mahogany Outcropping	BN02	BM02
1	Woodward Ranch	BN01	BM01
0	Rio Blanco Store	BN00	BM00

TABLE IV A-1

Biology Cont'd

Program	General Location	Computer Code
Deer Mortality	North Side of Piceance Creek	BD01
		BD02
		BD03
		BD04
		BD05
		BD06
	South Side of Piceance Creek	BD07
		BD08
		BD09
		BD10
Deer Age Class	General Area of Tract	BE01
Coyotte Abundance	8 Transects for Total of 30 miles	BF01
	15 mi seg. near Hunter (control)	BF02 thru BF08
	15 mi seg. on & South of Tract (development)	
Lagomorph Abundance	Identical Locations to deer use days	BA01 to BA27
Small Mammals	Piceance Creek (Development)	BG01
	On-Tract-west (Development)	BG02
	Piceance Creek (Control)	BG03
	On Tract-east (Control)	BG04
Avifauna		
Songbirds and Gamebirds	N.W. of Tract-near Jimmy PJ-CH-C	BH01
	On Tract-Scandard PJ -D	BH02
	On Tract-Cottonwood PJ-CH-D	BH03
	S. of Tract-bet. W&N Fork Stewart PJ -C	BH04
Raptors	The entire tract and surrounding study areas.	BI01
Aquatic Ecology		
Benthos	USGS 90306007 (Control)	WU07
	USGS 58 (Development)	WU58
	USGS 61 (Development)	WU61
Periphyton	Piceance Creek Upstream (Control)	WP01
		WP02
	Piceance Creek Downstream (Development)	WP03
Water Quality	USGS 09306061 (Development)	WU61
Vegetation		
Community Structure		
	Chained pinyon juniper (1978)(Dev)	BJ01
	Chained pinyon juniper (1978)(Cont)	BJ02
	Upland sagebrush (1980)(Cont)	BJ03
	Bottomland sagebrush (1980)(Cont)	BJ04
	Pinyon juniper woodland (1979)(Dev)	BJ05
	Pinyon juniper woodland (1979)(Cont)	BJ06
Herb Productivity and Utilization	Identical locations to community structure	BJ01 thru BJ06
	Plus	
	60 range cages in random locations	BK01 thru BK60
	20 cages on south facing PJ for baseline	BK61 thru BK80
	5 cages for fertilization assessment	BK81 thru BK85
Shrub Productivity and Utilization	Same stations as Deer Use Days Study	BA01 thru BA27
General Condition	By aircraft over entire Tract area	Not in computer

Biology (Cont'd)

Program	General Location	Computer Code
Micro Climate	MC Sta. 1	BC01
	2	BC02
	3	BC03
	4	BC04
	5	BC05
	6	BC06
	7	BC07
	8	BC08
	9	BC09
	13	BC13

STATUS

SUBSIDENCE